GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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CONTRIBUTED ARTICLES

Size of Frame to Use in Queen-Rearing.

BY G. M. DOOLITTLE.

A CORRESPONDENT says he is a reader of the American Bee Journal, and requests that I give my views in that journal regarding the size of frame that it is best to use when rearing queens. He wishes to rear queens next year, and is undecided whether to use the regular size frame for that purpose or make a smaller size especially for queen-rearing. And, as he wishes to make the preparations this winter, he is anxious that what I have to say will appear during the winter months, so it may be of use to him.

This may appear to be a matter of no general interest, but when it is fully understood that those who rear their own queens for general use in the apiary are the most successful honey-producers of the world, I think more interest will be taken in this part of our pursuit. There is scarcely an apiary in the land but what its owner realizes that he has in it one or two queens of more than ordinary value, but fails to breed for these valuable qualities because he does not understand queen-rearing; and so he lets the "goose which lays the golden egg" die without any special value to his stock accruing from her life, because he is not informed in the queen-rearing branch of apiculture. No person is an accomplisht apiarist until he is a thorough master of the queen-rearing part of the business. With these few words regarding queen-rearing in general, I will now write regarding the size of frame which should be used, according to my ideas, based on nearly 30 years' experience.

During these years of trial as to which is the best size of frame to use in queen-rearing, I have failed to find any special advantage in a small frame, while, according to my views, there are many disadvantages; therefore, I have come to the conclusion that it is the part of wisdom to use the same size of frame in any nucleus hive that we are using in the hive which we have adopted for general use in the apiary. As we are used to handling these frames we can handle them more rapidly, and with less injury to the bees and combs than we can those of an odd size, thus saving time in our work, and avoiding that irritation to the bees which causes them to annoy their keeper by following him around and trying to sting him and everything else that happens near the hives.

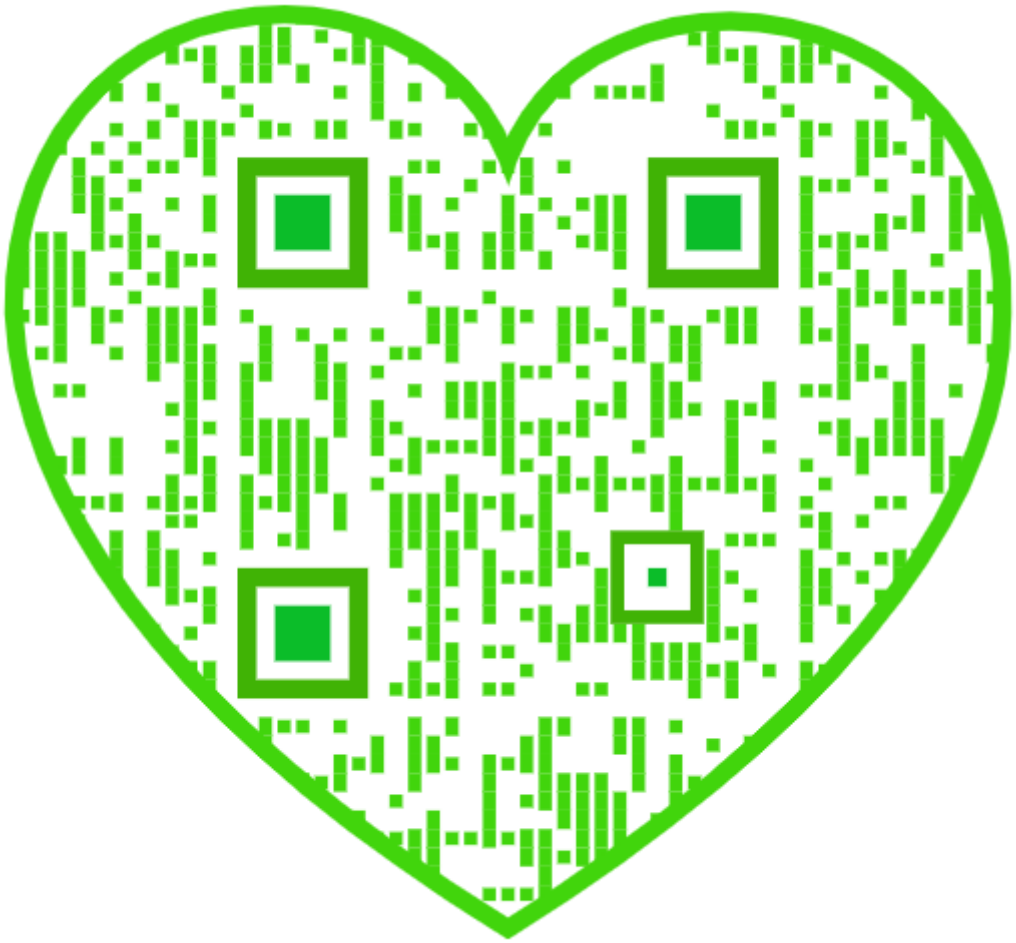
With me it is much easier and more expeditious to handle one or two full-sized frames than three or four small ones. Then the bees work more to our profit where the regular size of frame is used. If any comb is built by the nuclei it is in just the frames we want it, and always of the size of cells we wish, as these small colonies build only worker-comb where the young queen is left long enough for them to build comb. Where I have had combs in which the mice had gnawed holes, or the bees have made holes in them by cutting out moldy pollen, or in which there happens to be some drone-comb of more or less amount which I have removed, I always give them to these nuclei when forming them, and as soon as the young queen commences to lay, the bees will commence to build comb and repair these places, if honey is coming in from the fields, or if fed when no honey is to be obtained.

By leaving the young queen with them the length of time required, we have our combs all made as good as those built out on foundation, save the cost of foundation and the fuss of putting it in the frames, while such mutilated combs are just as good to form nuclei with as whole combs.

By a little looking over our combs each year, sorting out all those not being quite up to the standard, and using them as above, all the combs in the apiary can be kept in perfect order for all time, unless the cells should become so filled with cocoons as to become too small to rear bees in—a thing which has not happened in my apiary during the past 30 years.

G. M. Doolittle.

Again, if we use the regular size of frames, all the honey stored in these will be right where it will be of use to us for any colony in the apiary, either for spring, summer or winter use, so that we do not have to store away a lot of



combs and honey at any time of the year because it is not in shape for use.

In connection with the regular size frame I would always use the regular size hive for nuclei. Why? Because in this way we have nothing which will be a loss to us, and by using the regular hive we are ready to unite for winter on any stand we desire, without changing hives or anything of the kind, or can build up any nucleus into a full colony at any time.

But, as I consider it, the greatest advantage in the full regular size hive comes in not having our nuclei robbed out occasionally, as is almost sure to happen with some of the weaker ones, where small hives are used. Such robbing causes a general demoralization of the whole apiary, often to such an extent that the bee-keeper almost wishes that he had never known such a thing as a bee. By using the regular size hive, and placing the nucleus on one side of it, while the entrance is at the other side no nucleus large enough to hold a queen to advantage will ever be robbed out, and smaller than these should not be used.

To help the reader to understand better we will suppose that the regular hive is 14 inches wide inside, and that the entrance used is cut from the front board at the bottom, the whole length of it, and that the hive fronts south. Form your nucleus on the east side of the hive, using two combs, one of honey and one of brood; and next to these combs draw up the division-board or dummy, which should allow the bees to run under its bottom. Now close up all the entrance except one inch in length at the west side of the hive, and you will have it as I use them, and I have not had a single nucleus robbed since I found out this plan.

Now, suppose I wish a nucleus in the next hive on the same row in the apiary. In this hive I place the two frames and dummy next to the west side of the hive, while the entrance is on the east side, the conditions being the same as relating to the prevention of robbing, while the doorway to each hive is not at all similar. The next hive is fixt like the first, and the next like the second, and so on to the end of the row. In this way the young bees do not mix; and in returning from their wedding-flight no queens are lost by entering the wrong hive, as used to happen when I used an entrance in the same place with all the nuclei in the apiary. I consider this far preferable to painting the fronts of the hives containg nuclei, of different colors, or laying sticks of wood about the hives, etc., as has been recommended so many times in the past.

If the nucleus becomes stronger than is profitable on the two frames, move out the division-board and give them an empty frame with a starter of comb foundation, and see how quickly they will fill it with beautiful worker-comb. If too weak for the two combs, take away one and draw the division-board up so that it is suited to the wants of the little colony, thus always working to the best advantage, and making everything done by any or all count on the right side of the ledger page.

Onondaga Co., N. Y.

An Appeal for Co-operative Experimental Work in the Apiary for 1899.

BY R. C. AIKIN.

MOST apiarists do more or less experimental work. We might say that life, as it relates to our actions, is one long list of experiments. Experiment and research are necessary to advancement. He who is the most advanced is the man possessing the greatest aggregation of ideas.

To progress it is necessary that we think and experiment, and collective and extensive work carried on by many men and minds will progress more rapidly than if limited to narrow channels, both as to scope and to minds directing.

I am a natural investigator. Tho inheriting the inquisitive disposition, I did not inherit the filthy lucre to enable me to prosecute investigation to advantage, hence my efforts are, and always have been, very handicapt. The season I plan to work out certain lines of thought, often proves to be a very poor one for that line of work. Then, too, it takes several different kinds of seasons, and a great variety of conditions, to prove a theory.

Suppose we plan certain work for the coming season, and to carry out the experiments 10 or 20 apiarists in as many locations and under many and varied conditions, all join in the work, then compare notes how great progress we might make in a single season! The same work in the hands of one man would be years in attaining the desired result—often would be abandoned in despair.

I am now going to appeal to the fraternity to assist me in some work for 1899. I will tell you some things I want demonstrated, how I propose doing it, and why. Others can no doubt help me in planning the details of the experiments, and can help in carrying them through. I do not want to name those who shall help, preferring to get volunteers. I do not know who can and will do the work, but you, reader, know for yourself and can offer your services. I think that a volunteer will do better work than a drafted man.

But you will want to know what we are to try to demonstrate, what theories we want to prove or disprove. I will name some of them:

PRODUCTION OF COMB HONEY VS. EXTRACTED.

It is said, and believed by many, that an apiary run for extracted honey, and with ready-made store-combs, will yield more surplus than will a similar apiary managed for section honey and having to build combs. The proportion of extracted over that of section honey is variously estimated at from one-fourth more all the way to three times as much. My own belief is, that where intelligent management is practiced, and in an average location, the surplus will not exceed the proportion of four to five in favor of the extracted.

I do admit that in basswood flows, or any flow that comes on *very abrupt* and *free*, honey may be lost where comb has to be built to receive it; but, while admitting this, I do think that to put out the unqualified statement that so very much larger yields can be obtained by running for extracted, and placing such before the average reader, is not doing the right thing. I am now nearing 25 years of quite extensive apicultural experience, and scarcely a year that I did not produce both comb and extracted honey, having very little basswood, buckwheat and cleome, white clover, red clover, heart's-ease, Spanish-needle, alfalfa and sweet clover crops, and in all these years, and from the varied sources, and both summer and fall flows, never did I obtain twice as much extracted as of comb, per colony. Do you wonder that I want more positive support of the popular belief?

DIFFERENCE IN HONEY RESULTS BETWEEN COLONIES.

Another thing I want to see demonstrated, is the difference in work accomplisht between a colony largely of young bees, and one whose bees are all of field-age. The reason for this experiment is to demonstrate the necessity of a good stock or supply of old bees in a colony to make it a good honey-gatherer. I believe that herein lies much of the difference in amount of surplus put up by one colony as against another that should *apparently* do equal work.

UNQUEENING DURING THE HONEY-FLOW.

A third experiment is to demonstrate the effect of removing a queen from the colony during the honey-flow. Many claim that a colony made queenless will not work with the vigor of one retaining the queen in full laying. It has been my practice for several years to unqueen about the beginning of the flow, and for several reasons. I have for nine years been running from three to five apiaries. All these years I never pretended to remain in the various yards to manipulate swarms, but visited each place as often as I could at intervals of one to three weeks. I have largely unqueened to prevent swarming.

A second object was to have only sealed brood, or nearly so as possible during the main harvest, that the colony might give its whole attention to the work of gathering and storing. The advocates of natural swarming claim that the colony without a queen—even the one retaining its queen but not swarming—will not store equal to one allowed to swarm. Direct and comparative tests side by side, and date for date, are necessary to thoroughly demonstrate the matter and show it in a clear light.

OTHER IMPORTANT QUESTIONS.

Then there are the matters of big hives vs. little ones, big colonies vs. little ones, and a whole lot of unsettled matters. One question that is a factor in nearly all of the others, is the one of wax-secretion. We are taught, and the teaching has been generally accepted as correct, that for each pound of wax built into comb we have lost from 15 to 25 pounds of honey. Some put the loss of honey much higher than this.

It is argued that the production of wax costs directly the consumption of not less than 15 pounds of honey for one of wax produced; that the bees secreting this wax and building the comb, if not thus engaged would be in the fields after nectar; thus we have not only lost directly the 15 pounds of honey necessary to the secretion of the wax

(just as liberal feed is necessary when a cow is secreting milk), but in addition we lose in varying quantities what these same bees might have gathered from the fields if freed from secreting and working wax.

Contrary to all this, I believe that all normal colonies, when gathering nectar and ripening and storing the same, secrete more or less wax regardless of the need of it; and more, that the secretion and manipulation of this wax is principally by bees *under* field-age—bees that would have been idle if not thus engaged. It seems to me that those who make claim to the doctrine of the great loss of honey when a colony has to build comb, make this assertion without due consideration of all the facts. Let me offer a few figures:

A 10-frame hive, Langstroth size, takes nearly two pounds of wax to construct its comb. Surplus honey from the same hive to the amount of 25 pounds, means about three pounds of wax secreted, which, at the ratio of 15 of honey to one of wax means 45 pounds of honey consumed in comb construction. Suppose that the loss by bees being detained from the fields that otherwise would have been there—say reducing the field-force one-third, amounts to one-third the total honey gathered. This would be reasonable surely. The brood-combs should contain not less than 35 pounds, which added to the 25 of surplus received would make 60 pounds. Thus the bees kept secreting wax and building it into comb, should have instead added to the total store another 20 pounds.

Put these figures together and what have we? Forty-five pounds of honey *consumed* in wax-secretion, 20 lost by bees kept at home—total 65 pounds. If such a theory is correct, a *swarm* hived and building *all* its comb and yielding a 25-pound surplus, should, if given all the comb they could use, have yielded, in addition to the 25 pounds, 65 more—a total of *90 pounds of surplus* honey. Is not this a reasonable conclusion?

My next will discuss details of experiments to prove the truth or fallacy of the general accepted theories.

Larimer Co., Colo.

Large Hives for Either Comb or Extracted Honey.

BY C. P. DADANT.

THE following letter, which was sent to the Editor of the American Bee Journal, is referred to me for reply:

EDITOR YORK:—I think that many who are trying to solve the hive question will be misled by Mr. Dadant's articles on the proper (?) size of hive. It should be remembered that Mr. Dadant is an extracted-honey man. I have lookt in vain through his writings for his emphatic advice to use just as large a hive for comb honey as for extracted.

I wish Mr. Dadant would answer this question: Do you advise just as large a hive for comb as you do for extracted honey?

Until I became a specialist, two years ago, I used the 10-frame Langstroth size, exclusively. After trying 8-frame and 10-frame hives in the same yard, I have come to the conclusion that I can get more comb honey per brood-comb with the smaller hive, and have fewer unfinisht sections.

I now think that those "who make their bread and butter by producing honey to spread upon the bread and butter or others," should figure their production as so much per comb, and not so much per queen.

After everything has been considered I think it will stand about this way: If you have nothing but the care of your bees to take up your time you will probably make more money with a small hive. If you have a farm to work, you would better use a larger hive.

Yours truly, E. W. BROWN.

I would very much dislike to mislead any one, in whatever I write on bee-culture, but most especially on the hive-question, which, as is well known, we have tried to avoid, as it has been so often rehearst and discust that the subject has become stale to us. But it appears that, as others find that we succeed with a large hive, and hear that we prefer it to others, and have good reasons for so doing outside of our practical experience, they make inquiries about it, and this is why I have been requested to write a series of articles on the subject in Gleanings. So, if the subject proves worthless, and our experience proves injurious to the bee-keeping public, we will not feel as deserving of any blame.

I am very free to say that we are not at present comb-honey producers. All the comb honey that is produced in our apiaries is produced by our boys, for their own pleasure, on one, two or three hives, every season, and I notice that they take particular pains to select a very powerful colony in every case. But we *have been* comb-honey producers, and would be yet if we could get more than twice as much for comb honey as for extracted. But as long as we can sell extracted honey freely for three-fifths to two-thirds of the price we would get for comb, we will probably produce extracted honey.

The experience of Mr. Brown we notice to be similar to that of many others. They try a small hive—the 10-frame hive—and finally change to something still smaller. We tried the 10-frame Langstroth hive with something still larger, and changed to the latter.

I have often noticed that the supporters of small hives agree that the large hive may be good for extracted honey, but is not suitable for comb honey; but I have never seen any one give a single reason for making this difference. The only attempt I have met to an explanation of the difference, is in an article by G. M. Doolittle, in Gleanings, in which Mr. Doolittle says:

"If the queen has all the vacant cell-room her prolificness requires, more room is only a damage to our crop of comb honey, for in the finding of vacant cells in the brood-chamber, at the beginning of the honey harvest, comes an 'accustoment' to the brood-chamber for storing honey, instead of the sections, and thus the queen is crowded upon with honey, instead of said honey going into the sections," etc.

That is, if there is honey produced, with a large hive and not a very prolific queen, and there is plenty of room in the brood-chamber, this honey will be stored in the brood-chamber. This is just our experience, and when producing comb honey with large hives, we would do as some of the large producers of the East are doing, so I am told, who

C. P. Dadant.

have nothing to say publicly, tho they quietly work and produce tons and tons of honey, by simply reducing the number of combs, just at the opening of the crop, to the exact number that are covered by the brood, which just as efficiently forces the bees into the supers as if a very powerful colony had been placed in a small hive.

When we produced comb honey, let it be remembered, we were already using the large hives, and we did not practice the above-mentioned method, which I am told is so very successful with men like Elwood; and the result was, with us, that we always had too much honey in the brood-combs for winter, and we were in the habit of extracting it; but I wish to emphasize the fact, that, side by side with smaller hives, our colonies were, on the average, ahead of the others, just that quantity of honey which we were able to take from the brood-combs.

Now, please bear in mind that our experience was not based upon a hive or two, or upon one year or two, but that we have had as many as a hundred hives of one style, while we had two or three hundred of the other style, for years. It has always been a wonder to me, how comb-honey producers could do without an extractor, and this owing to the fact that, in large hives, we always had some that had more honey in the brood-combs than they needed for winter, when producing comb honey. The Elwood plan would have done away with this, and would have forced the bees to put that honey in the supers, since the hive, in cases where the

queen lackt in prolificness would have been reduced or kept down to a size proportionate to the strength of the colony.

Now, please do not accuse us of saying that, with comb-honey production in large hives, you will have no swarms. We do not even say that, of our own methods, with extracted-honey production. But we do say, and we know every man who tries it will acknowledge, there will be less swarms, many of the colonies will be stronger, and the production of honey, on the average, considerably greater, since there will be a greater average production of bees in the hive.

Mr. Brown says: "If you have nothing but the care of your bees to take up your time, you will probably make more money with a small hive. If you have a farm to work, you would better use a large hive." But he does not tell us why. When some of our bee-men discuss the hive-question, they seem to take it for granted that the small-hive bee-keeper has all the colonies he can manage at the opening of spring, and that it is of little import whether all his queens have all the room they need. Mr. Hutchinson says, "Queens cost nothing." We can't take it from that point of view. Queens, to us in early spring, are the most expensive part of a colony, and we want each queen, in every one of our colonies in early spring, to have all the room she needs. If we have 80 colonies in one apiary, we want each one of those 80 queens to have the very best chance possible to display its powers, and we consider that the cost of the hive, which has to be replaced only about once in 30 years, is the smallest item of expense. The interest on the money-cost of a large hive, as compared with that of a small hive, is not to exceed 10 cents per year. This represents a necessary production of only about one or two pounds of honey more each year; and when we consider that a large hive may be made as small, by a division-board, as the smallest hives in the land, and can still, at a moment's notice, accommodate the very best colony in the country, with increast facilities for manipulation, we can but shrug our shoulders at the idea of any return to small hives, even if we desired to return to comb-honey production. Does this answer Mr. Brown's question?

Now, Mr. Editor, I sometimes think that it looks as if we had an ax to grind on large hives, but we have no patent, never did have, and don't care—no, not a copper cent—whether any one tries our methods or not. We know that it takes more of a bee-keeper to manage the large hives than the small ones, and therefore have no hesitancy in referring bee-keepers to the warning I gave some weeks ago, on trying new things, tho ours is not a new thing, neither is it our own idea, but only a putting in practice of the ideas advanced by masters in the art long before us.

And as to the pride we might take in creating a larger following among the bee-keepers of the land, we are past that, too, for we have pupils and followers of whom we can well be proud, all over Europe and America, northern and southern.

Hancock Co., Ill.

No. 1.—The "Golden" Method of Producing Comb Honey Described.

BY J. A. GOLDEN.

I HAVE been requested by the Editor of the American Bee Journal to contribute a series of articles relative to my method of producing comb honey, for the benefit of its readers, with discriptions of the manipulations of my combination comb-honey hive, the idea of which I donated to the bee-fraternity of the world free and unstained from patent, altho letter after letter has been received asking why I don't secure a patent on my hive, and make myself independently rich. My answer has invariably been, "No, no." For the reason that patented articles deprive thousands of poor bee-keepers from competing with their more wealthy competitors, providing the implement or method patented has superior advantages over the former. Realizing this fact in my own circumstances in life, I could do no better deed for my brother and sister bee-keepers than I have done in presenting the Golden method as previously stated, believing it to be far more profitable.

What I wish to say in regard to the Golden hive and method in this series of articles will be founded on practical experience, and not on theoretical knowledge.

As hundreds of new apiarists have engaged in our pursuit since my method was publisht in 1896, and are reading and hearing reports from bee-keepers who are working the Golden method with grand success, even realizing more than double the amount of surplus honey per colony than from all other colonies by other methods, therefore, in presenting my method and hive before the readers of the American Bee Journal I shall do so honestly and truthfully. My object, then, will be to place before the bee-keepers of the world a system of producing comb honey which, in my judgment, will in time become the general method for the production of section comb honey.

But before doing so, permit me to insist that all who *can* will please re-read Mr. C. P. Dadant's wise letter of advice on page 675 (1898). It is chock-full of wisdom, and the result of many years of a practical life in apiculture. Then let us all revere Mr. Dadant for his words of advice, which will prove to be drops of gold to many bee-keepers if heeded.

In 1895-96 I was experimenting with the two-queen system, and by this method a tremendous force of workers or field-bees were reared and ready for storing nectar when the flow came, but being a close observer I soon discovered that such an army of workers could not freely enter the hive, having to crowd their way through in order to deposit their loads of nectar and pollen, and altho the entrances were enlarged it did not seem to lessen the difficulty. It was then that I began to theorize upon the great improvements of Father Langstroth and others, and the thought suggested itself to my mind that men of long experience have from time to time been writing of different methods of the production of comb honey, and thus much valuable knowledge is gained by those who read the bee-papers and practice the valuable suggestions therein taught; however, there are thousands perhaps who yet claim, boastingly, that they know more than the bee-papers teach, and still persist in thumping the old tin pan and ringing the old preserved cow bells of a hundred years ago.

Thus, after due consideration, I conceived and put in practice two hives having side passage-ways fom the bottom of the brood-chamber to the supers, having the outside made of glass, and as I was using the house-apiary my hives were rather crude. However, they answered the purpose, and the next day after the change was made, after spending an hour looking through the glass watching the thousands of little workers marching up the side entrances to deposit their loads of nectar, I noticed the entrance comparatively free and easy of access. I called to my good wife and assistant to come and behold a new and great discovery, that in time would supersede all other methods for the producing of comb honey, providing swarming could be controlled so as to keep the great army of workers in an unbroken compact.

Then the thought suggested was, Why not hive the swarm in what we termed "a double super," containing 48 sections? This was adopted, and success was the result. This method I have manipulated ever since, and have no desire for anything better, believing it the most simple and profitable method for the production of comb honey that I am acquainted with.

Morgan Co., Ohio.

[To be continued.]

CONVENTION PROCEEDINGS

UNITED STATES BEE-KEEPERS' UNION.

Report of the 29th Annual Convention, held at Omaha, Nebraska, Sept. 13-15, 1898.

DR. A. B. MASON, Secretary.

SECOND DAY—EVENING SESSION.

[Continued from page 819.]

RELATIONS BETWEEN BEES AND ALFALFA.

Prof. Hunter, of Kansas, was then introduced to the convention, and in acknowledging the introduction he stated that he had been conducting some experiments within the past year upon the matter of the relations between the bee and alfalfa.

Dr. Miller—Won't you give us in a few words the result of your investigations concerning alfalfa?

Prof. Hunter—I was very much interested in what I saw in one of the Omaha papers of yesterday concerning some discussion that had been had before this convention regard-

ing sweet clover and alfalfa. I observed that there was a difference of opinion among you, but the reporter for the paper did not give any definite information as to what the sense of the association was. I have been working along this line somewhat, but there are men here who would naturally be better informed than I am as to the relative value of the two plants. The experiments that we have gone through with during the past year have shown that the value of alfalfa depends upon conditions—that in different circumstances there is a difference of results. Irrigated alfalfa does not give us the honey results that we get from alfalfa which has had a moderate degree of moisture from natural sources; and where it is on dry ground, entirely free from all humid influences, we get little or no nectar. I do not know whether that answers the question or not; but those are the three points that we have been working upon.

Dr. Mason—Are you sure you haven't made a mistake about that matter of irrigation and moisture in the air, and its effect upon the honey-yield?

Prof. Hunter—I am giving you the results of the experiments that have been conducted thus far.

Dr. Mason—Science sometimes makes great mistakes.

Prof. Hunter—I am always willing to grant that. One season's experiments would not allow me to give what might be called conclusive results. The theory that we have now is that irrigation simply affects the root of the plant, and its growth, while humidity of the atmosphere would more affect the blossoms. There is a certain percent of moisture taken from the atmosphere by the plant that would not be taken by the roots; that is, there are certain chemical changes that take place in the plant and in the flower, that we are not able to perfectly understand, but the theory is that the different conditions are produced by the different effects from irrigation and from rainfall. Irrigation does not give the humidity of the atmosphere that rainfall does.

Mr. Danzenbaker—Which is better?

Prof. Hunter—Rainfall gives better results.

Mr. Whitcomb—You were speaking in regard to alfalfa as compared with white clover.

Prof. Hunter—We have not much white clover where the alfalfa grows, so for the comparative results we shall have to depend largely upon the experience of the men who have dealt with both. The bee-keepers of western Kansas say it is equal—some go further and say it is better—but the conservative ones say it is equal to white clover in its honey. It would be very interesting to me to hear a little discussion among the members present upon that point.

Dr. Mason—I have often thought of what Mr. Root once had to say in Gleanings. Prof. Cook had made an analysis of Alsike clover, and found that it did not contain nearly the nutriment that other grasses do, and Mr. Root's idea was that he would give a great deal more for the opinion of of the horses and cows on its food value than for the opinion of science. It may, or it may not, be true that what the Professor has said will work out all right in practice. If I understand him rightly, his theory is that alfalfa does not yield honey in a country where it is simply irrigated, and where there is no moisture in the atmosphere.

Prof. Hunter—I am trying to give you comparative results, or a statement of the circumstances where it would give you the best results.

Mr. Rauchfuss—I lived in the old country, in Germany, in a very moist section, where it rains nearly three times a week, and I never knew that alfalfa was a honey-plant while I was there—I never saw a bee on it, nor regarded it in the light of a honey-plant. When I came to Colorado I was surprised to see what quantities of honey the bees will sometimes gather from alfalfa, and I have tried to find out under what conditions the bees will do the best on alfalfa. For this purpose I have had two hives on scales. I have noted down the temperature, the maximum and minimum temperature each day, and also the general conditions of the weather, and I have found that in most cases a day that is fairly calm, with little wind, and comfortably warm, from 80 to 100 deg.—would be the best for the bees to gather honey from alfalfa. And in regard to alfalfa that is irrigated and alfalfa that is not irrigated, the latter the bees will visit, but they do not seem to get much from it. This year we have had about 20 acres of alfalfa within 500 yards of our bees. It was not irrigated on account of having too much other work, and the bees went right over that patch and visited some that was irrigated three miles off. We have had our bees go as far as four miles away into alfalfa fields that are in good bloom. Occasionally, of course, they will visit alfalfa that is not irrigated, but they do not do very much good on it. In regard to the maximum yield—16 pounds a day—that is, for a single day in the best of the season, has been the most that we have ever had from one colony. Last year we had two colonies on scales, and one gained 101 pounds in 10 days. That was a fairly good yield. It was a good colony. The other colony that we had on the scales was not in nearly so good condition, but it discounted the other after all, for it stored 220 pounds of extracted honey in the season, while the one that made the 10 days' record produced only 180 pounds for the season. This last colony we have had on the scales for seven years, and during those seven years it has never had at any time in the season more than five frames of brood. It was in a 10-frame hive, and averaged about 200 pounds of honey a year. It was originally an Italian colony, but has been hybridized.

Dr. Miller—I would not give a blue button for the investigations of the scientist if they are not borne out by practical experience. But let us be very careful about underestimating the work of the scientist. We may find that there will be appearances of contradiction when there is no contradiction in fact. I very much doubt whether there is any real conflict here. The Professor tells us that the raincloud is worth more than the irrigating ditch, while on the other hand Mr. Rauchfuss tells us that the alfalfa that was irrigated was worth very much more than that which was not irrigated. There is not necessarily any contradiction here. The point is, the alfalfa in the one case was irrigated; did that in the other case have plenty of rainfall?

Mr. Rauchfuss—No, sir.

Prof. Hunter—Where there has been too much rainfall, you have another condition in which you get no yield. This year my work has been in 15 counties, but I would not like to have you understand that there is anything conclusive in the result of the experiments, because I do not consider that one season's work can be conclusive. We are beginning to work in earnest, and I am endeavoring to make every man who owns a colony of bees in the State of Kansas a co-operator in the work, whose testimony will be worth as much as mine.

Mr. Stilson—This goes along in the same lines upon which we have been experimenting in this State a little. To-morrow, when you are on the Exposition grounds, we will show you some results along these same lines of which the Professor speaks. You can get some profit by discussing the question out there.

Dr. Miller—Why is it that in Germany the alfalfa yields no honey, while it yields honey out here, and within 10 miles of my place in Illinois it doesn't yield a drop?

Mr. Westcott—I have eight acres of alfalfa at my place that grew a length of nine feet this year. I let that alfalfa stand until it was in blossom, and in fact it was too ripe before I cut it. I never saw bees on it but one time, and then only a few. I visited it quite often. In the middle of the summer, before I cut it, I tried it again, but when I lookt at it then there were no more bees upon it than there were in the spring. It is in blossom to-day, but I have received no honey from that alfalfa yet.

The convention then adjourned to hold an informal session on the grounds of the Trans-Mississippi and International Exposition, the next forenoon, at 9:30.

The following are the papers by Dr. Brown and Wm. McEvoy, previously referred to; the first is by Dr. Brown:

Needs of Bee-Culture in the South.

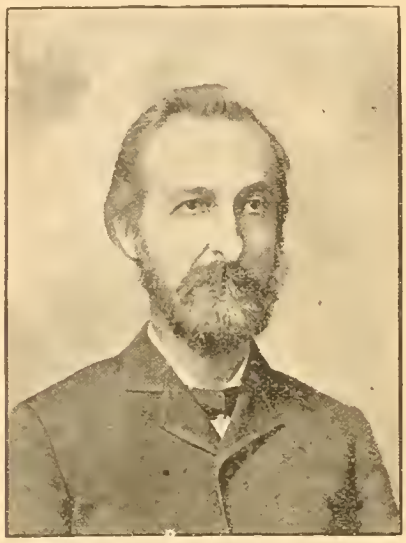
This subject embraces so much and presents so many topics for discussion that I am at a loss to know what to select for this short paper. You will find the needs in the South of the same character as the needs that are required for the successful and profitable culture of the honey-bee in all other sections of our country.

The first great need is an abundance of honey-producing flora; second, bees to gather it; third, sufficient knowledge on the part of the bee-keeper to enable him to know *when* and *how* to manipulate the bees in order to secure the most profit from their industry; and fourth, a market for the sale of the product when gathered. I think these are the great needs for profitable apiculture in any country.

In the South we have a greater variety of melliferous plants than there is in the North. The honey season is more extended, while the flow seldom comes in, as it were, in a rush. From the middle of June until the first of September bees seldom gather more than a support, except possibly along the coast of Florida, where the black mangrove grows. There is need of a forage plant capable of standing drouth and heat, and at the same time secreting honey, to come in and fill up this void between the close of the spring harvest and the fall honey-flow, which comes about the first

of September. For nearly 30 years I have been trying and experimenting, to find such a plant, but thus far I have failed to do so, and do not believe any such plant can be found.

The South needs to have more attention paid to the preservation of her native forest honey-producing trees; for instance, the poplar, which is one of the best. More attention should be paid to the culture and propagation of honey-producing plants, particularly to those having other uses than the mere secretion of honey. Crimson, Alsike and white clover do well on most soils, but best on alluvial soil. The two latter clovers did well and secreted nectar abundantly



Dr. J. P. H. Brown.

in the latitude of Augusta, Ga., the past season. We need more attention paid to fruit-culture, for with it we get more sweets. We need to build up and preserve the honey-flora.

Knowledge of what to do, when to do, and how to do, is greatly needed. The person who invests money in bee-fixtures, and not in books of instruction, has just thrown his money away, for bee-keeping will only be a delusion to him. "Knowledge is power," and the mass of Southern bee-keepers need it.

With most honey-producers a better market is needed. Many look off to some big market, accompanied with big railroad freight and commissions, and lose sight of developing and building up the home market. By a liberal scattering of tracts explaining the properties and uses of honey, and offering it in small packages neatly and cleanly put up, a trade can be establisht in places where now only a few pounds are sold.

While the Lord helps all, the Southern bee-keepers need to put their shoulders to the wheel and work out their own salvation by pluck, knowledge and untiring energy.

J. P. H. Brown.

The following is the paper written by Mr. Wm. McEvoy, Foul Brood Inspector for the Province of Ontario, Canada:

Foul Brood—Its Cause and Cure.

Foul brood will be almost a thing of the past when every bee-keeper keeps dead brood out of every colony of bees. The very filthy habit that so many have fallen into, of putting comb with dead brood in, into colonies for the bees to clean out, is a bad one, and one of the very best ways of spreading foul brood. Many a bee-keeper finding two or three of his colonies dead, and not knowing that they died of foul brood, has divided the combs among his best colonies, to get the bees to clean out the decayed brood he found in them, and instead of getting the combs cleaned out, spread the disease through his apiary at a rapid rate. I have always claimed, and do yet, that where brood-rearing is continued for a length of time in weak colonies, among a quantity of decaying brood, that it will sooner or later end in foul brood. If we want our colonies to keep in a healthy condition, and do well, we must keep dead brood out of them.

The young bee destroyed by foul brood first turns yellow; as it decays further it becomes a brown, ropy matter, and many of the capt cells (in bad cases) will be sunken a little in the capping, with a small hole in some of them. When the foul matter dries down it settles on the lower side and bottom of the cells, and sticks there like glue, and will remain there as long as the comb lasts. And when the bees are gathering honey they store it in the cells where the foul-broody matter dried down, just the same as they do in sound cells, and often seal them; then, as soon as the larvæ is fed any of the honey that has been stored in the diseased cells, it will die of foul brood; and when larvæ is fed in cells where foul matter dried down, it will also die of the disease.

No foul-broody colony in the world was ever cured, or ever can be cured, by the use of any drug. To cure an apiary of foul brood, every comb must be removed out of every diseased colony, and the bees thoroughly cleansed of the honey which they will take out of the old combs when they are being removed. In the honey season, when the bees are gathering honey freely, remove all the combs out of the diseased colonies *in the evening*, and shake the bees back into their own hives; then give them frames with foundation starters, and let them build comb for four days. The bees will make the starters into combs during the four days, and store the diseased honey in them which they took with them from the old combs.

Then in the evening of the fourth day remove the new combs and give the bees full sheets of foundation to work out, and then the cure will be complete.

By this method of treatment all diseased honey is removed from the bees before the full sheets are workt out.

All the old, foul-broody combs, and those made out of the starters during the four days, must be made into wax or burned.

The curing can be continued after the honey season closes, and the bees be cleansed of the diseased honey by feeding them sugar syrup *in the evenings* during the four days they are on the comb foundation starters, and when the little combs are removed, the fourth evening, and the full sheets of foundation given, the bees should be fed plenty of stores to winter them. Where the colonies are weak in bees, put two, three or more of them in one, so as to make good, strong colonies to start the curing with, and end the season with good, strong colonies, which are the only profitable ones to keep.

In all the thousands of diseased colonies that I have

Wm. McEvoy.

gotten cured of foul brood, I never had one empty hive boiled, scalded or disinfected in any way; and I know for a fact that the empty hives cannot give any colony the disease.

Wm. McEvoy.

Doctor's Advice Free.—American Bee Journal subscribers (and especially the women of the households) are entitled to free medical advice on enclosure of a stamp to Dr. F. L. Peiro, Central Music Hall, Chicago, Ill.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Introducing Queens.

Critic Taylor, in the Bee-Keepers' Review, calls attention to the fact (for which I thank him) that on page 727 (1898), in telling a sure way to introduce a queen, I did not mention that the queen should be put in. Come to think of it, it would be a good plan to put her in, but by no means at the time he suggests—"not till a handful of bees appear." There would be nothing to gain and a good deal to lose by waiting so long. Put her in just as soon as you put in the frames of brood. C. C. MILLER.

The Granulation of Honey.

There is a woman who sells strained honey here, and says it is pure, and of her own extracting, yet it candies quickly. Also a merchant here who has a lot of honey in pails labeled as *pure*, yet it is as solid as so much soft maple sugar. The directions say, "Put the pail in warm water and it will dissolve;" also that "*all* honeys will candy." Now is this true? Is it old or new honey? Or will new honey candy? NEW YORK.

ANSWER.—The exceptions are so few that it may be said that all pure honey granulates sooner or later, there being no exceptions that I ever knew in Northern honey. If you see a package of honey that has stood through the winter without granulating, you may be almost sure there's glucose in it. Cold weather hastens granulation, yet extracted honey generally granulates before freezing weather and sometimes before it is taken from the hive. If you get any extracted honey at this time of the year, you may feel pretty sure it will granulate soon after you get it, if not already granulated.

Queens Piping Board Cover Over Bees in Winter Prevention of Swarming.

1. Will you please describe, as nearly as you can, the sound of a queen piping? I do not know a thing about it, and I would like to know what it is like so I will be sure of what I am doing when the time comes.

2. On page 694 (1898), in the answer to the fourth question, from Michigan, I understand that you have used for some time a board cover instead of a quilt over the bees. Do you mean this for double-walled hives on the summer stands, with packing on top of the board cover? If so, how can the moisture go up through the board, as much of it ought to?

3. If I have the queen's wing clipt when she swarms, if I kill her and put her on the alighting-board, and the bees go in again, and when I hear the young queen piping, if I cut out all queen-cells will it be a sure plan to keep them from swarming? BALDWIN.

ANSWERS.—1. That's a very hard thing to do. Sit down and try to write a description of the crowing of a rooster so that one who has never heard it will know exactly what it sounds like. But altho it's so hard for me to tell you what the piping of a queen sounds like, it isn't so hard for you to tell it when you hear it. The sound a queen makes when piping is a good deal like the repetition of the word "peep" or "teet." It's a rather shrill sound, uttered several times in succession, the first time long drawn out, then shorter and shorter, then the queen will be silent for a time considerably longer than she occupied in piping, when the piping will be repeated, perhaps in a different part of the hive, for when a queen is piping she generally is on the move pretty lively, only when she is piping she remains perfectly still. If a strong colony has sent forth a prime swarm, and nothing has been done to prevent the issue of a second swarm, you may hear piping a week after or later. Go to the hive in the evening after the bees have stopt flying and all is still. Put your ear against the side of the hive and listen patiently. Perhaps within two minutes you will hear, "p-e-e-e-p, p-e-e-p, pe-ep, peep, peep," and immediately after it you are likely to hear one or more of the young queens that are yet in their cells replying in a coarser tone, "quawk, quawk, quawk," the quawking queens seeming to be more in a hurry than the one that pipes. I don't believe you'll have much trouble to tell it when you hear it.

2. I use single-walled hives and winter them in the cellar.

3. Yes, if you cut out all queen-cells; but if you miss a single one it will not work. Neither is there any use of putting the dead queen on the alighting-board. The bees will usually come back without that, altho sometimes they may go into some other hive whether the queen is dead or alive. If you kill the queen, or take her away, do it when the prime swarm issues. If you leave her till the young queen pipes, the bees may annoy by swarming out several times before the young queen issues from her cell. By the time the young queen pipes, the old queen is likely to be put out of the way without any attention from you.

Staple-Spaced Frames Chaff Hives Pure Italian Bees vs. Hybrids T Supers vs. Pattern-Slats.

1. Do you consider staple-spaced frames all right to handle? In this locality regular Hoffmans are very badly stuck together.

2. Would you advise me to use chaff hives where there is no cellar to winter in?

3. Would it be best to buy pure-bred Italian queens, or breed from good hybrids? Each of two colonies of hybrids gave me over 50 pounds of nice comb honey from the fall flow of heart's-ease.

4. I am well pleased with T tins over pattern-slats. The bees enter more quickly, work better, and seal the outside sections almost as soon as the centers. I have destroyed all old pattern-slat supers. ILLINOIS.

ANSWERS.—1. You will very likely like the staple-spaced frames much better than the Hoffmans, and perhaps you might like the right kind of wire nails still better than staples.

2. In your locality (central Illinois) it is doubtful whether it is advisable to use chaff hives. If you winter outdoors you can use single-walled hives with some protection.

3. Better breed from the pure stock. Suppose you reared a number of queens last summer from a pure Italian queen, and you found that these young queens had all met black drones, and that every colony of these hybrid bees stored 50 pounds of heart's-ease, while the pure stock did not do so well; it might seem to you that because the hybrids did the better work it would be better to breed from them. But if you did so you would probably find that the next generation of hybrids would fall behind the pure Italians. You'll probably get all the hybrids you want when trying to breed pure Italians, and you'll find those hybrids better than those that are reared from hybrids.

4. I am with you in preferring the T supers, but are you not giving them just a little too much credit? It hardly seems to me that there would be a very noticeable difference as to bees entering supers, and I can't see any reason why they should finish the outside sections in the T supers better than in the others.

Taking Bees from Between House-Partitions.

My friend in Long Island has a colony of bees that has made its home in the side of her house, between partitions, for several years. Once she took off the boards and cut out a large quantity of honey. She has become greatly interested in bees and bee-culture, and would like to hive these bees, if possible, and wants to know when and how to do it. HOLLIS.

ANSWER.—Much depends on the "lay of the land," each case being a case by itself. However, having once cut out honey, it ought not to be a very hard matter to go just a step farther, cutting out the combs, and removing combs, bees, brood and all. Perhaps the best time to do this will be when fruit-trees are in bloom. Then put combs in frames after the manner described in your text-book as transferring. Some one who has had a little experience in handling bees ought to undertake the job, and he will know how to get the bees out of the way when transferring the combs.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

1899 is the way it is written now. Fast is the 20th century approaching. Another year, and the American Bee Journal will be in the last year of its fourth decade and second score of years. Forty years is quite a ripe age for a paper to attain unto, and particularly a *bee*-paper. It is rare that a periodical is older than its editor. But the American Bee Journal is such a rarity. But its age doesn't seem to weaken it much it is not infirm if it is old. Of course, sometimes appearances are deceptive; but hardly, we hope, in this instance.

Dangerous Drugs as Cures for Bee-Stings are earnestly inveighed against by Somnambulist in the Progressive Bee-Keeper. "Never, *never* resort to the use of toxic drugs" for so small a thing as a bee-sting. Whiskey is sometimes recommended for bee-stings, but that is not so dangerous as drugs, for its character is known, while the others silently but surely fasten upon the victim without his knowledge until it is too late.

Bee-Chat is the name of a British bee-paper that has been publisht quarterly, but now comes out as a monthly. It is edited and publisht by one of England's best-known practical bee-keepers, S. Simmins, the author of that practical work, "A Modern Bee-Farm." Long life to the chatty Bee-Chat.

Shipping Beeswax.—We have handled quite a large quantity of beeswax during the past four or five years, and we have often wondered why so many ship it in heavy boxes when sacks made of almost any material except paper are so much lighter and more easily handled. And then, there is no need of paying heavy freight or express charges on a clumsy box, weighing perhaps 10 pounds, and holding say 20 pounds of wax, when a sack not over a pound in weight would answer better in every way.

We once received several hundred pounds of beeswax from Utah, all in burlap sacks (the sacks weighing, we presume, about six pounds), when, had the shipment been put in heavy boxes, it would have weighed 50 to 100 pounds more. The freight charges on that lot of beeswax were about $3 a hundred pounds. It would have been rather expensive to ship boxes at that rate, when the sacks were better in every way. But many do not think of these apparently little things which go far toward making the difference between success and failure.

A Roll of Honor is talkt of by A. I. Root, composed of all who have taken Gleanings for 25 years, or since its first number, in 1873. That is a first-rate idea. We hope it will be a long roll. Suppose we, too, begin such a "roll," and compare it with Mr. Root's, just for fun, you know. Let us call for all who have taken the American Bee Journal for 25 years *or over*. Please mention the exact number of years, when writing us, and we will print a "Roll of Honor" sometime in February—next month. Just drop us a card any time during this month, and let us see how near our "roll" comes to being as large as Mr. Root's.

How to Read a Bee-Paper is described by Mr. Harry S. Howe, of New York, in the last Bee-Keepers' Review. The plan he now wisely follows in reading is this:

1. Re-read the articles that seem of especial value.
2. Discuss them with any bee-keeper who gets in range.
3. Test a few of the best ideas on a small scale at first.
4. Lastly, read all the advertising matter in each paper.

Mr. Howe, the past season, read four of the bee-papers publisht in the United States, and said that when any two chanced to come together, he was like the boy who sat down between two pies—it didn't make much difference where he began.

The Spaniard is soon to become enlightened in bee-keeping, along with many other excellent things he is learning about, these days. Gleanings reports that the book, "Langstroth on the Honey-Bee," has been ordered translated into the Spanish language, by the Minister of Agriculture, of Mexico.

New York State's Honey Crop in 1889, according to the census of that year, was 4,281,96¼ pounds. Probably last year it was nearly 6,000,000 pounds, which shows that New York is a great State in more ways than in area and population. Take it year after year, it is probably the best honey State in the Union.

Sending Comb Honey to Market.—Since we have been trying to do something in the line of wholesale honey dealing, we have been getting some experience. We used to have very little sympathy with the honey commission firms, thinking that almost invariably the honey-producer was the much-abused man. Lately we have been thinking that some of them deserve being abused, especially some of the comb-honey shippers.

The trouble is, that every bee-keeper seems to think that nobody ever produced so fine honey as his—no matter if the combs are twisted around three ways in each section, and are all travel-stained and bulged besides.

Then, again, some do not seem to know the difference between white comb honey and amber—unless the amber is

a coal-black honey-dew. We have had a grocer reject a whole case, and refuse to buy at all, just because he happened to pull out a section of honey that was a trifle off color, when all the rest of the case was fine. That bee-keeper should learn not to mix his grades of honey, but keep them in separate cases, and mark them accordingly.

But what a pleasure it is to get in a lot of honey from a bee-keeper who *knows how* to assort and put up his comb honey for market. We have had at least two such lots this winter—one from Iowa and the other from Wisconsin. If we continue to sell honey to Chicago grocers, year after year, we will likely select the bee-keepers whose honey we desire to purchase.

We may say further, that we think less than ever of the commission method of handling honey. The buying-and-selling-outright method is the proper one, if the bee-keeper sends exactly the grade of honey he agrees to. If he misrepresents, he should have his honey shipt back to him, and be compelled to pay the freight charges both ways.

Low Prices for Honey, according to M. W. Shepherd in the American Bee-Keeper, are due to the fact that the laboring classes, the chief consumers of honey, get such low prices for labor that they cannot afford to buy honey. The remedy is to reduce the price of honey to compete with the cheaper sweets, and have supply dealers lower their prices. The editor says every one is at liberty to make his own supplies, and if any one thinks supply dealers make too heavy charges let him emphatically and forever disabuse his mind of that error by making his own supplies for one season. He concludes, "If the existence of our industry can be sustained only through a reduction in the price of supplies of the present standard of excellence, its days are numbered."

Bees n Switzerland.—In an exchange we learn that Consul General DuBois says bee-culture has increast in Switzerland during the past 20 years 100 percent; that there are now 275,000 colonies in that country. The canton of Lucerne has 187 colonies to every 1,000 of the population, which is the highest average in Switzerland. This means a colony of bees for every family, or for every five or six persons in the canton of Lucerne. With its invigorating mountain air and delicious honey everywhere, Switzerland ought to be a healthy country.

Mr. A. I. Root was 59 years old Dec. 9, 1898. May yet many happy, prosperous years be his.

* * *

The National Fanciers' Association and Illinois State Poultry Association will hold their annual Poultry Show from Jan. 9 to 14, 1898, in Chicago. It promises to be a grand affair—and a great "cackling week" for this city. Everybody interested in poultry ought to attend this show.

* * *

Mr. J. E. Crane—a famous Vermont comb honey producer—visited the A. I. Root Company last month. He has about 500 colonies of bees, and produces as fine honey as we ever saw. We had the pleasure of examining about a carload of his honey, and it was simply superb. But what surprises us is that he doesn't read the American Bee Journal. At least we can't find his name on our list. Just think what honey he might produce if he should take the Bee Journal!

Mr. Doolittle and Dr. Miller are both referred to editorially in Gleanings for Dec. 15. The editor of that paper has visited these two leaders in American apiculture, and says that one (Doolittle) uses a meat-block on which to place his typewriting machine when using it, and the other (Dr. Miller) an ordinary high stool. Editor Root seems to have expected mahogany desks and upholstered chairs. Oh, no; busy, hard-working men like Doolittle and Miller have no use for "soft," showy and expensive luxuries. Only big bee-supply manufacturers can have such! Of course, all apiarian editors might enjoy them if they could afford to have them, but we know of only two, perhaps, that either possess such elegant things, or might if they wisht. They are Root and Leahy. And we are not a bit jealous. We like to see other people enjoy themselves when they can afford it.

* * *

Editor Hutchinson, in the December number of his paper, says, "Success comes only with hard study, courage, thoroughness, and genuine enthusiasm." He ought to know, for we believe he possesses all of these characteristics, and, from his own words, has arrived at the coveted goal. It means a good deal to succeed now-a-days, especially when handicapt as some have been that we might name. But the race in life is not always to the swift or dashing; it is more often won by the patient plodder. We feel that it will not be ours to know whether we have won success—or successfully won; at least not for awhile yet. In the meantime we are content to plod on, ever striving simply to make a good, full-measure bee-paper.

* * *

Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Union, has been sick, hence the delay in mailing his annual report and voting-blanks. On account of his sickness, he has wisely taken the responsibility of changing the date of closing the polls from Jan. 1 to Jan. 15. We are glad to know that our General Manager is recovering from his illness, and trust he is quite himself again now.

* * *

Mr. W. B. Blume, of Cook Co., Ill., called a few days ago, and handed us $1.00 for the Langstroth Monument Fund when renewing his subscription for 1899. Good way to do. Let others do likewise. Mr. Blume had his best crop the past season—3,300 pounds of comb honey from 80 colonies, spring count, and closing the season with 97 colonies, which he is now wintering.

* * *

Mr. J. F. McIntyre, of Ventura Co., Calif., wrote us as follows:

"California bee-keepers are a 'blue' set just now. They have just past through the dryest year since 1877, and are now threatened with another, and bees are not in condition to stand another dry year. Guess we will have to migrate if it doesn't rain this winter. How is Cuba?"

* * *

F. B. Mills, of Rose Hill, N. Y., has one of the most beautiful 68-page catalogs we have seen. You will find Mr. Mills' advertisement in the Bee Journal during this month. Be sure to send to him for his catalog, and say you saw his name and address in the American Bee Journal. Then afterward buy some seeds of him.

* * *

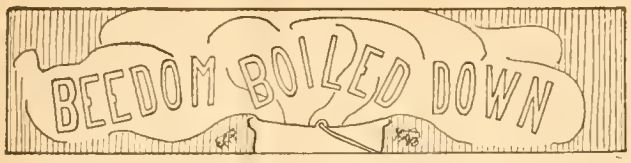
The Cyphers Incubator Co., of Wayland, N. Y., have a wonderfully fine catalog and guide to poultry-culture that they mail for 10 cents. Our readers will make no mistake if they send 10 cents for that catalog, and at the same time mention having seen the Cyphers Company's advertisement in the Bee Journal.

* * *

Mr. E. E. Hasty, of Lucas Co., O., we learn, has terminated his long series of "A Condenst View of Current Bee-Writings" for the Bee-Keepers' Review. Mr. Hasty did fine work in that department. We presume the new "Department of Criticism" takes the place of the former by Mr. Hasty.

* * *

Mr. E. J. Cronkleton, of Harrison Co., Iowa, wrote us Nov. 11: "I have taken the American Bee Journal since October, 1884, and by its help and my own ability I have sold thousands of dollars worth of honey at a nice profit. No one should think of keeping bees without it."



Bad Year! the worst for 50 years! Most French bee-keepers haven't enough honey to winter their bees, says Le Rucher Belge.

An Australian Honey-Yield.—W. J. reports in Australian Bee-Bulletin that from 80 colonies he got 11 tons of honey and increast to 115; 275 pounds per colony and 43 per-cent increase is not so bad.

Utah Yield.—E. S. Lovesy reports in Gleanings the highest he has heard of in Utah the past season, as nearly 5½ tons of honey from 31 colonies, increast to 82. That average 350 pounds per colony—in an off year is not bad.

To Seal Bottles. Take four parts rosin, four parts pitch, and one part beeswax. Melt the wax, add the resins, and when the whole is liquid, dip the bottle in to the neck, take out and turn it around, holding the bottle horizontally, so all parts will be equally covered.—Revue Eclectique.

To Keep Honey Light in Wax-Extractor.—D. W. Heise (Canadian Bee Journal) is delighted at having learned that when cappings are put in the wax-extractor he can prevent the accompanying honey from becoming dark by never allowing the sun to strike the vessel containing the honey, and removing it just as soon as it has run down.

Plain Sections, says M. L. Mam in American Bee-Keeper, are filled and completed more uniformly than others, and the honey in the outside rows will be more securely attacht to the wood, hence a larger number will grade fancy. A picture of eight sections from his apiary shows the combs not so very well finisht out to the wood.

Built-Out Combs vs. Foundation.—Allen Sharp, in British Bee Journal, says that in his experience he finds that bees prefer fresh foundation in sections to unfinisht combs of the previous season, or those that have been a long time on the hive. Some in this country agree with him, while others take the reverse view, saying that bees object to partly-built combs only when they are in bad condition.

Best Ventilation for Hives in Hot Climates, says W. W. Somerford in Gleanings, is that secured by raising the cover ½ inch at one end, the flat cover being best. "If ventilated thus, hives with flat covers (even tho covers are made of stuff only ½ inch thick) will be perfectly safe to sit in any tropical sun, even when combs are full of honey in the top story." Of course such ventilation would not work well for comb honey.

Right Strain of Bees for Comb Honey, says J. B. Hall in the Canadian Bee Journal, must be great gatherers, not afraid to leave the brood-nest to store, filling the combs to the top-bar with brood, building combs without the use of brace-combs, filling the sections to the wood all around, and not afraid to cap it when full. Such bees can be kept, and are kept, but "it requires constant culling to keep out undesirable stock."

Saltpeter Rags for Smoker Fuel.—I take a two-gallon crock (of course larger or smaller would do), and throw into it a pound of saltpeter, then fill half full with water. Into this I put pieces of rotten wood or cotton rags. The wood must be allowed to soak for a day or so, but the rags may be taken out at once, or they may be left a month. If you use rotten wood for fuel, and wish to tell the saltpeter wood easily from the other, it's a good plan to throw a little red aniline dye into the crock. An old milk-pan with holes in the bottom, or an old colander, stands in the crock, and some of the rags are put into that to drain and dry. Next time I come for saltpeter rags I take them out of the colander, put some out of the crock into the colander, and put some new ones into the crock. If none are dry enough I dry them in the sun or stove-oven. When I want to fire my smoker I take a rag, perhaps a piece of an old shirt or dress, the size of my hand (I don't mean the dress but the rag is the size of my hand), touch a lighted match to it, roll it into a little ball, and drop it into the smoker. Then, without waiting to see whether it will burn or not, I fill up the smoker with chips, planer-shavings, or what-not, with no fear but there will be a good fire with very little puffing.—Dr. C. C. Miller, in Gleanings.

Are Drones from a Drone-Layer Virile?—Australian Yankee, in Australian Bee-Bulletin, thinks he has proved that they are. He had blacks, and there were no Italians within 20 miles. He got some Italian brood and reared late in the fall a queen that never produced a worker, but thousands of drones, worker-brood from other colonies being constantly added. Many of his young black queens produced progeny with yellow bands, showing that they had mated with the yellow drones from the drone-layer.

Uniting Colonies.—J. O. Grimsley, who conducts the "Department of Bees and Honey" in the Ruralist, is charmed with Doolittle's plan of uniting colonies. He varied from it by not caging the queen, and thinks it not necessary to cage her. To unite, he had two colonies with four combs each, 8-frame hives. He took queen from hive A, then put in A the combs, bees and all, from B, alternating the frames. No hive being left on the stand of B, the returning bees heard the call and joined the united colony, or else made their home wtih some near-by colony.

Which Way Should Combs in the Hive Run?—G. M. Doolittle discusses the matter in Gleanings. In a state of nature bees build their combs in all directions. In this country most bee-keepers have the frames in the hive with one end toward the entrance. This allows the hive to be tipt forward so water can run out of the entrance. If frames hung crosswise, the combs would not hang true in the frames. There is better chance for ventilation in hot weather if frames run toward the entrance. Bees returning from the field can more readily get to any part of the brood-chamber.

Cleaning Hives Annually.—F. L. Thompson says in the Progressive Bee-Keeper that for some years he has been inclined to think it time fooled away, laboriously to scrape all hives every spring; but he has swung completely around in his views since coming in charge of an apiary that had been run on the let-alone plan. It was such a terrible job to get all in good working order, that he will hereafter scrape clean each spring every hive. That gives chance for clipping queens and thoroughly inspecting everything at one opening early in the season; then in the swarming season he doesn't dread to open a hive on account of bur-combs, frames glued down, etc., but everything works easily and smoothly.

Doolittle's Box-Plan of Uniting a number of weak colonies is given in the American Bee-Keeper. For two or three small colonies make a box that will hold 12 quarts; for larger colonies, one that will hold at least 20 quarts. One side must be of wire-cloth nailed on. The other side should consist of wire-cloth nailed to a light frame, so it can be easily removed. A funnel is put in a hole in the top of the box. Blow a little smoke into the first hive, and pound on the top with the fist, then treat in like manner the others in succession. In five minutes from pounding the first hive, the bees will be filled with honey. Shake the bees into the funnel, caging the queen when found. A cloth in the funnel when not in use keeps the bees in. Bump the box down so as to shake the bees on the bottom, remove the funnel and cover the hole. Mix the bees thoroughly by shaking and tumbling the box. Bump it down again and drop into the hole a caged queen, having the cage suspended by a wire hookt over the top of the outside of box. Have candy enough in the cage so bees will liberate the queen in four to six hours. Put box in cellar or other cool, dark place. Next morning—if the bees were put in box in the evening, or in the evening if the bees were put in the box in the morning—take off the movable side and empty the bees like a swarm in front of their destined hive.

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To get new customers to test my seeds I will mail my handsome **catalogue for 1899**, lithographed and beautifully illustrated, and a **10c. Due Bill**, good for 10c. worth of seeds for trial, **absolutely free**. It is full of bargains. All the **Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc.**, at lowest prices. **Ten Great Novelties** offered without names. I will pay **$50. FOR A NAME** for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. **You will be surprised at my bargain offers.** Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy.

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Ctf Please mention the American Bee Journal.

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Beats 'em all.

is absolutely perfect as to incubator essentials—proper application and distribution of heat and moisture, regulation and ventilation. For 50 to 350 eggs. WE PAY FREIGHT ANYWHERE in the U. S. Handsome catalog free. Petaluma Incubator Co., Box 91 Petaluma, Cal.

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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218 North Main Street, - LOS ANGELES, CAL.

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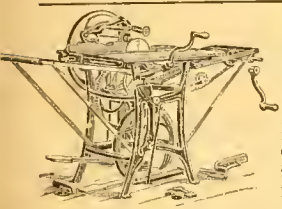

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We make the New

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with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. **R. H. SCHMIDT & CO.,** SHEBOYGAN, WIS.

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Many people have lost faith in incubators because they bought one that was never intended to hatch chickens—made merely to sell.

The Von Culin Incubators are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c.

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TO SELL OR LEASE FOR CASH.

An up-to-date Apiary consisting of 200 good colonies or over, with Fixtures complete. Privilege to remove to some other location if desired. Correspondence solicited. Address,

THE GILA FARM CO.

51A6t *Cliff, Grant Co., N. M.*

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In the multitude of counsellors there is safety.—Prov. 11-14.

Best Size of Hive for Beginners.

Query 87.—In the light of your own experience, what hive, or size of hive, do you consider best for a beginner to start with—1st, for comb honey production; 2nd, for extracted honey? OHIO.

Dr. A. B. Mason—A 10-frame Langstroth.

E. France—1 and 2. The Langstroth hive for both.

R. L. Taylor—1. The 8-frame Langstroth hive. 2. Ditto.

Prof. A. J. Cook—1 and 2. Langstroth for either or both.

Emerson T. Abbott—1 and 2. An 8-frame "St. Joe," of course.

W. G. Larrabee—1 and 2. 10-frame Langstroth in both instances.

Dr. J. P. H. Brown—A 9 or 10 frame hive, with a frame the size of the Langstroth.

P. H. Elwood—1. Not over 2,000 cubic inches. 2. For extracting, one quite a little larger can be used.

G. M. Doolittle—1 and 2. The Langstroth frame is as good as any, and for a beginner 10 frames to the hive will be no mistake.

Jas. A. Stone—1 and 2. I have no other than the 10-frame "Improved Langstroth-Simplicity," because I like it best for all purposes.

Eugene Secor—1 and 2. Localities may differ. For my locality and method of wintering, an 8-frame Langstroth seems to be as good as any.

Chas. Dadant & Son—1 and 2. We use larger hives than common, but if you take a standard, don't use anything smaller than a 10-frame Langstroth.

D. W. Heise—1 and 2. A Dadant-Quinby, if you should remain a beginner only. Apart from that, you must study your locality and be governed accordingly as to size.

J. E. Pond—1 and 2. Twenty-five years' experience causes me to advise the regular Simplicity 10-frame hive. I don't think a better one exists, and fully believe that others by its use will think as I do.

Mrs. L. Harrison—1 and 2. As far as as my experience goes, a Langstroth hive for both. Localities may differ. I've had the best results with an 8-frame Langstroth, which can be used two-story for extracted honey.

C. H. Dibbern—1 and 2. One naturally loves his own child the best, and I think there is no hive equal for either comb or extracted honey to the "Dibbern." However, I believe a beginner will succeed as well with the Langstroth as any other.

R. C. Aikin—1 and 2. As circumstances may cause a change from one to the other, or a mixt production, your hive must suit either. I want a shallow frame, and to use from one to any number of sets as needed for results.

95% HATCHES

are often reported by those who use a

SUCCESSFUL INCUBATOR

One reason for this record is absolute uniformity of temperature in egg chamber. Correct instructions for operating; has fire-proof lamp. Will hatch every egg that can be hatched. Send 6c. for new 148-page catalogue. Filled with hen information and plans of poultry houses.

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We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover	60c	$1.00	$2.25	$4.00
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Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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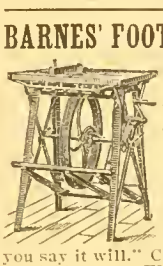

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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Seven years ago we started an Apiarian Supply business in NEW YORK CITY, as we saw an opening here. That we made no mistake in this is shown by the large demand for Supplies and our constantly increasing trade. Our aim was to turn out Supplies promptly. In many cases bee-keepers find the freight on Supplies from the Western factories is as much as the cost of the goods. In buying near home you not only save freight, but get your goods much more promptly. We keep several carloads of

Hives, Sections, Foundation, Etc.,

always in stock ready to ship, and the prices will be found RIGHT. We also run two apiaries for honey and sell BEES AND QUEENS. If you expect to use anything in the Apiarian line the coming year, you will do well to send for our Catalogue. We would be pleased to quote you SPECIAL PRICES on what you want, as this is our dull season, and we can afford to sell for small profits. Hives, Sections, etc., are made in Wisconsin, where lumber is low, and the best can be had.

Our Special Price on Foundation, Hives and Sections will make you Smile.

Write for it, stating the quantity you can use. DEALERS should write for our '99 discount sheet which is now ready to mail.

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Apiaries, Glen Cove, L. I. Please mention Bee Journal when writing.

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FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. Millions of Sections Polisht on both Sides.

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

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IN 60-POUND TIN CANS.

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Best Basswood Honey in Barrels.

We have a quantity of finest basswood honey in barrels, weighing 625 pounds net, which we are ready to ship f. o. b. Chicago, at 7½ cents a pound. Sample mailed for 8 cents. If desiring to purchase, let us know, and we will write you the exact number of pounds in the barrel or barrels, and hold same till you can send the cash for it by return mail.

Our honey is **ABSOLUTELY PURE BEES' HONEY**, the finest of the kinds produced in this country.

☞ We would suggest that those bee-keepers who did not produce any honey for their home demand the past season, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. Address,

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and always with a honey-board, and surely queen-excluding when extracting. Start with what you expect to continue with. Think hard and long, and get advice of skilled apiarists before starting.

Dr. C. C. Miller—1 and 2. That depends. If you intend to give the bees little attention, perhaps the Dadant or Quinby hive. If you intend to give all the intelligent care possible, the 8-frame Langstroth or dovetail, using as many stories as needed.

J. A. Green—1 and 2. Standard goods are best for a beginner, as a general rule. A hive holding 8 Langstroth frames would be about right for comb honey. For extracted I would prefer 10. The larger hive would be a better all-purpose hive for a beginner.

S. T. Pettit—1 and 2. 15½ inches from front to rear, 17⅛ from side to side, inside measure; and 9¼ inches deep, with 12 frames. The advantages are: Long entrances; more ventilation; wide hive, more super room; the section supers project front and rear.

J. M. Hambaugh—1. Much depends. For comb honey, 10-frame Langstroth for brood-chamber, Miller supers for surplus. 2. For extracting, the body above to be the same as the brood-chamber, here in California. I prefer the Dadant hive where wintering is a problem.

O. O. Poppleton—1. Let comb-honey producers answer this. 2. I can do better with a long single-story hive, with deep frames. For some reasons a more standard double-story hive would be best; but I couldn't conscientiously advise something I have myself discarded.

Rev. M. Mahin—1 and 2. The main thing in a hive is ease and facility of manipulation. As to size, something depends—much, in fact—upon the honey-resources of the locality, and no universal rule can be given. I would make no difference between a hive for comb honey and one for extracted.

E. S. Lovesy—1. I prefer the 10-frame Langstroth, 28 sections to the super, with double section-holders, which virtually protects the sections. 2. The 10-frame short Langstroth we run three stories. It is easy to manipulate, and not so liable to break the combs in extracting.

G. W. Demaree—I would have but one kind of hive (brood-chamber) for producing comb and honey in the extracted form. In the Southern and Middle States the standard Langstroth—10-frame—is as good as the best I have tried. Further north, perhaps, the 8-frame Langstroth suits a shorter season.

Plain Section and Fence Endorst.

This year we had our first experience with plain sections and fence separators, and were very much pleased with the result. With the open sections it usually occurs that the inside sections of the super were filled first, but with the plain it was not so with us this year. In some cases the outer sections were the only ones in the

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This is a good time to send in your Beeswax. We are paying **26 cents a pound — CASH** — upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

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T. F. BINGHAM, Farwell, Michigan.

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☞ Send us your name and address and we will take pleasure in mailing you a copy,

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We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

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Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

case that were filled, and the outside just as well finisht as the inside. We had a separator outside of the last row of sections—before we put in the spacing board—and thought that was why they filled so well to the outside. Even tho some of the cases had but few sections of honey in them, they were filled out to the wood better than we ever had the open sections filled.

And as to the trouble with the plain sections shipping well, there is no question but that they are far ahead of the others, for the reason that the honey is so firmly united to the wood that it would be a hard matter to break it; and the face of the honey, we have seen no instance in which it protruded even with the wood.

Another thing, they are so easily cleaned.

JAS. A. STONE & SON.

Sangamon Co., Ill., Dec. 8.

Bees Did Nicely.

My bees did nicely during last summer. I have 18 colonies now, and they went into winter quarters with plenty of stores, so if none of them die during the long winter, through some unforseen cause, I will have a splendid start next spring.

I am very fond of the American Bee Journal, which comes regularly every week during the year. My wife also likes it very much. ARNOLD GERLACH.

Shawano Co., Wis., Dec. 12.

A Poor Season.

The past season was poor here; I got 300 pounds of surplus honey from 22 colonies. A man 30 miles west got 1,500 pounds from 80 colonies; another near me got three pounds from 50 colonies. C. E. MORRIS.

Carroll Co., Iowa, Dec. 12.

Bees Did Well.

I think my bees did well. I started last spring with 16 colonies, and now have 51, and got 800 pounds of section honey. The bees are all on the summer stands, well packt in chaff hives, with plenty of honey.

ROY H. MOORED.

Osceola Co., Mich., Dec. 7.

Not a Good Season.

The past season was not a very good one for honey in this locality, but my bees are in good condition for winter.

JOHN S. DOWDY.

Logan Co., Ill., Dec. 9.

A Three-Year-Old's Report.

The American Bee Journal is indispensable to me. It has proven a sure guide, with what little common-sense I could mix in with it. It is my only text-book; when I want to know anything concerning my bees, I take the last year's numbers, turn to the index, and soon find what I want to know.

I started in three years ago, a green-horn, with two colonies. The first year I got 50 pounds of comb honey from one colony; lost one queen in swarming, by two swarms settling together, consequently I did not get any honey from the queenless one. I increast to four colonies.

The next year (1897) was a total failure, and everybody had to feed for winter stores.

Last spring I started with 6 good swarms, got 300 pounds of comb honey in one-pound boxes, and 300 pounds of fine extracted, besides increasing to 15 good colonies, after doubling up for winter.

My bees are all pure Italian. I requeened all my own, and sold a few queens. My queens are all purely mated. From one colony I took 100 pounds of well-filled comb boney, and from another 150 pounds of fine extracted boney. The hives were so full of honey when preparing for winter, that I took out from one to two full frames, and will save them for spring use.

It was so dry the latter part of the past season that I did not have any fall flow.

I sold my boney from house to house at

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the LARGEST FACTORIES and the latest and most improved machinery for the manufacture of Bee-Hives, Sections, &c., that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the BEST GOODS AT THE LOWEST PRICES.

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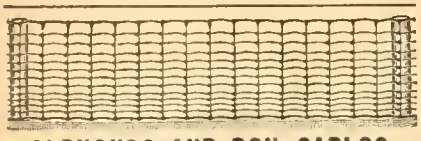
GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

44A26t Please mention the Bee Journal.



ALPHONSO AND DON CARLOS

seem to be bad friends. We've heard there's a dispute over line fences. That always makes rows. Fix the **line**, we'll fix the **fence.**

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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KEROSENE SPRAYERS
Is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best.
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Beeswax Always Wanted

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Send me your name, whether you are a small or large consumer or dealer.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

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THE "NOVELTY" POCKET-KNIFE

Your Name on the Knife.—When ordering, be sure to say just what Name and Address you wish put on the Knife.

The NOVELTY KNIFE is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed an AMERICAN BEE JOURNAL reminder, and on the other side, name and residence of the Subscriber.

The material entering into this celebrated knife is of the very best quality; the blades are handforged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring steel, and the finish of handle as described above. It will last a lifetime, with proper usage.

Why purchase the Novelty Knife? In case a good knife is lost, the chances are, the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your pocket KNIFE will serve as as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a Christmas, New Year or birthday present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, a lady to a gentleman, or vice versa, a son to a mother, a husband to a wife, a brother to a sister or a gentleman to a lady—the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid, for $1. , or give it as a Premium to the one sending us **three new Subscribers** to the BEE JOURNAL (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book "Bees and Honey." We club the Novelty Knife with the BEE JOURNAL for one year, both for $1.90.

Any Name and Address Put on the Knife.

GEORGE W. YORK & CO.,
CHICAGO, ILLS.

15 cents a pound, for both extracted and comb. I have sold to quite a number that kept bees, but did not get a pound from them.

I had quite a little experience, for me, with one colony. It became hopelessly queenless about May 1; it was in an 8-frame hive, and very heavy. They commenced coming out of the hive until the ground would be almost covered, would run around, double up as if they had the colic, and die. I thought some disease had gotten hold of them. This was for a number of days. I then transferred them into a 10-frame hive, and it stopt entirely—no more dead bees. I concluded that being queenless they were killing one another off, because they were too thick. I had sent to Georgia for a couple of queens, and was waiting for them to arrive.

I bought an Italian queen a year ago in the fall; they did not seem to increase much through the summer. This fall, when preparing for winter, I found the queen, being clipt. There were only a few bees, and a large swarm of drones. This was about Nov. 1. I killed the queen, and gave them a queen-cell from a nucleus that I had sold the queen from a few days before, then doubled up the nucleus with them; they reared a nice queen. I don't know if she mated or not. They had two or three good flights with a peck of drones, or less.

W. H. BROOKS.

Snohomish Co., Wash., Dec. 5.

Bees Dying from Grape-Juice.

I do not know whether I will have any bees or not next spring. They are dying off very fast now. There was a good crop of grapes here, and the bees got a great deal of juice out of them; the "honey" they stored from the grape-juice is killing them. I am glad to see the Bee Journal is trying to help improve the English spelling, for the English language and the American liberty will spread from pole to pole.

JOHN CRAIG.

Macoupin Co., Ill., Dec. 12.

Fine Surplus of Golden-Rod Honey.

The American Bee Journal came to us on "probation" this season, but has proven so good that it has to enter now as a "full member."

Bees winter successfully on the summer stands with but little protection in this locality. They went into winter quarters this fall with a good supply of stores—mostly from golden-rod—of which they gave a fine surplus. Bees had a good flight Dec. 4, but the hives are now almost hidden with snow.

W. L. MCGHEE.

Jackson Co., Ohio, Dec. 6.

Bees in the Great American Desert.

In the spring of 1897, I had 7 colonies, increast to 16, and got 1,220 pounds of honey, about half extracted and half comb.

In the past season I increast these to 30 colonies. The spring being cold and wet we lost fruit-bloom, locust, and box-elder. The first flow we got was from alfalfa. I secured 1,415 pounds.

I winter my bees on the summer stands, packt in straw or wrapt with burlap or carpet, with chaff cushion. My bees are strong and healthy. I feed light colonies early in the fall, and stimulate by feeding in March and April.

I don't have to ask many questions, as I can refer to my file of Bee Journals, or to "A B C of Bee-Culture," and find just what I desire to know. If the beginners would take Dr. Miller's advice, and get a good text book, they could find what they desire to know in five minutes; whereas, they must wait a week or two before they can find out through the Bee Journal.

My neighbors' bees are troubled with foul brood. I have armed myself with Dr. Howard's treatise on the subject, so I may be ready when the pest makes its appearance in my apiary.

I am well satisfied with the bee-business,

and attribute my success to the American Bee Journal. It arrives every Friday. I take the rocker in the warm corner, and Mrs. H. smiles and says, "Your testament is weekly."

I have beeu interested in the discussion in regard to a pure food law, by the members of the Union. I am not a member of that honorable body, but I hope to be in 1899. This great State of Kansas needs a law of that kind. Adulterated food is sold in our city every day, and merchants tell me that the honey they have for sale is adulterated, but it goes off very slowly until my stock of honey is exhausted. I think that Kansas can do something this winter. I have talkt with our representative, who is a merchant here, and he will gladly do anything in his power in the House this winter, to get a pure food law in Kansas.

If General Manager Secor, of the Union, will send a copy of the Bill required, or to be adopted, to some good, live bee-keeper, or to some representative who will look after it, and if every bee-keeper in Kansas goes to work—sees or writes to their representatives and senators—I believe that this will be one among the States honored with a pure food law in 1899. P. R. HORBLE.

Ford Co., Kans., Dec. 9.

Red Clover as a Honey-Plant.

My 26 colonies of bees, spring count, produced 913 pounds of extracted and about 125 pounds of comb honey in one-pound sections.

I don't take much stock in red clover as a honey-plant. My bees work more or less on it almost every year during hot and dry weather; but it does not produce as fine honey as white clover; when candied it is coarser grained, and has a water-soakt appearance. I wish my bees would let it alone, for we have plenty of white clover when the red is in bloom.

FRED BECHLY.

Poweshiek Co., Iowa, Dec. 11.

A Young Bee-Keeper's Report.

Last summer was the first time I ever handled bees, and had a poor year to start. I am 16 years old, and tend to my father's bees; he has about 105 colonies. I got only about 500 pounds of extracted honey and 200 of comb this year. I think the failure was on account of wet weather.

I have spent my Saturdays this autumn covering my hives with steel roofing. I had only three swarms last summer, and they were all late ones and stored no honey. I have about 25 empty hives which I hope to get filled with strong swarms next spring.

I am going to see Mr. Dadant some day; it is only about eight miles from where I live. I know I will enjoy myself.

My father is going to sow some alfalfa next spring, to try it.

EDMUND WORTHEN.

Hancock Co., Ill., Dec. 11.

A Wintering Arrangement.

I have been a reader of the valuable Bee Journal for three years, and have been studying the best way to winter bees. I have a way of my own, different from any I have read about. I will give a description of it:

I take a dovetail super and fit in a ⅜-inch board the size of the super; fit in the rabbets at each end, nail a ¼-inch strip across each end of the the board, so that when it is turned over it will form a bee-space between the frames and super.

I then cut a hole in the middle of the board the size of a quart fruit-can; have the can four inches high, and punch the bottom of this can full of small holes. Now make a box five inches square, and four inches high, and fasten around this hole. In winter I put the can in the hole and fill part full of cotton around the can, so as to receive all the steam; the cotton will hold the damp if there is any. I fill the super with oats chaff, as I am using the chaff hives, and put a glass over this box. I can feed early in spring. I take this box out and put a section of honey in it, flat down, and do not disturb the bees. I can see them any time. Then, if I choose, I pour feed on this section, and there is no danger of robber-bees.

My bees stored but little surplus this year. B. O. WILLIAMS.

Marshall Co., Iowa, Dec. 7.

Pamphlets We Are Out Of.

We find that there has been such a large call for our premium pamphlets lately, that we have run entirely out of the following, for which we have been substituting others of equal value, trusting that it would be satisfactory to those interested:

Muth's Practical Hints to Bee-Keepers.
Preparation of Honey for the Market.
Bee-Pasturage a Necessity.
Hive I Use, by Doolittle.
Silo and Silage.
Green's Four Books.
Rural Life.
Bee-Keeping for Beginners, by Dr. Brown.

Convention Notices.

California. — The California State Bee-Keepers' Association will hold its annual convention at the Chamber of Commerce, in Los Angeles, Jan. 11 and 12, 1898.

Sespe, Calif. J. F. MCINTYRE, SEC.

New York.—The New York State Association of Bee-Keepers' Societies will hold their annual meeting at the Kirkwood Hotel, Geneva, N. Y., Jan. 11, 1899. All interested are invited. Bee-keepers' societies are especially invited to send delegates. There will be an exhibit of microscopic preparations of foul brood (Bacillus alvei), and discussions relating to foul brood legislation. Mr. E. R. Root will give an address on the subject of foul brood.

Ithaca, N. Y. HARRY S. HOWE, Sec.

N. E. Ohio, W. N. Y., N. W. Pa. —The 18th annual convention of the N. E. Ohio, Western New York, and N. W. Pennsylvania Bee-Keepers' Association will be held in the City Hall, Cor. 13th and Buffalo Sts., Franklin, Pa., Jan. 11 and 12, 1899. The following is the larger part of the program:

President's Annual Address—Geo. Spitler, of Pennsylvania.

"Spring Management of Bees"—L. K. Edgett, of Pennsylvania.

"Summer Management of Bees"—R. D. Reynolds, of Pennsylvania.

"How can the Conditions of the Local Market be Improved?"—B. W. Peck, of Ohio.

"The best means of Increasing the Local Honey-Resources"—H. S. Sutton, of Pennsylvania.

"Profitable Use of Comb Foundation"—J. T. Nichols, of Pennsylvania.

"Making our Association More Useful"—Geo. Spitler, of Pennsylvania.

"Preparing Bees for Winter"—N. T. Phelps, of Ohio.

"Experiences of the Past"—D. A. Dewey, of Pennsylvania.

NOTICE—It is hoped that all will make an effort to be at this convention, and take an active part in the discussions. Special rates of $1 00 per day for those attending the convention have been secured at the United States Hotel, on Liberty Street.

GEO. SPITLER, Pres., Mosiertown, Pa.
ED JOLLEY, Sec., Franklin, Pa.

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HONEY and BEESWAX

MARKET QUOTATIONS.

Chicago, Dec. 19.—Market is about as last quoted. Best white comb brings 13c, with off grades of white at 11@12c; amber, 9@10c. Some lots have come on the market and are being offered at prices that would be reduced if buyers could be found. Extracted steady at 6@7c for white and 5@6c for amber. Beeswax, 27c. R. A. BURNETT & CO.

Detroit, Dec. 8.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz.: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

Columbus, O., Dec. 15.—Honey arriving freely. There is quite an accumulation, and concessions in prices are necessary to move stock. Following prices are nominal: Fancy white, 12½c; No. 1, 11½c; No. 2, 10c; amber, 9c; dark, 8c.

COLUMBUS COM. AND STORAGE CO.

St. Louis, Sept. 9.—Fancy white comb, 12 to 12½c.; A No. 1 white, 10 to 11c; No. 1 white, 9 to 10c.; dark and partially-filled from 5 to 8c, as to quality. Extracted in cases, No. 1 white, 6 to 6½c; No. 2, 5½c; amber, 5c; in barrels, No. 1 white, 5½c; amber, 4½ to 5c; dark, 4 to 4½c. Choice Beeswax, prime, 24c; choice, 24½c. At present there is a good demand for honey. WESTCOTT COM. CO.

Kansas City, Sept. 9.—Fancy white comb, 12@13c; No. 1, 11@12c; amber, 10@11c. Extracted, white, 5½@6c; amber, 5@5½c; dark, 4½@5c. Beeswax, 22@25c.

The receipts of comb honey are larger.

C. C. CLEMONS & CO.

Milwaukee, Oct. 18.—Fancy 1 pounds, 12½ to 13c; A No. 1, 12 to 12½c; No. 1, 11 to 12c; No. 2, 10 to 10½; mixt, amber and dark, 8 to 9c. Extracted, white, in barrels, kegs and pails, 6½ to 7c; dark, 5 to 5½c. Beeswax, 26 to 27c.

This market is in good condition for the best grades of honey, either comb or extracted. The receipts of the new crop are very fair, and some of very nice quality. The demand has been and continues to be very good, and values are firm on fancy grades and straight, uniform packing. A. V. BISHOP & CO.

New York, Dec. 20.—The market is well supplied, especially with dark. Demand is but fair for white and dark and off grades are being neglected. We quote:

Fancy white, 12 to 13c; No. 1 white, 10 to 11c; amber, 9 to 10c; dark, 7 to 8c. Stocks of extracted of all kinds are light. White, 6½ to 7c; amber, 6c; dark, 5¾ to 6c; Southern, in barrels, 60 to 65c a gallon. Beeswax dull at 26 to 27c. HILDRETH BROS. & SEGELKEN.

Buffalo, Dec. 16.—Our market has become somewhat quiet since the holiday trade set in, and we consider 12 and 13c an extreme quotation for best one-pound combs now: with other grades ranging from 7 to 10 cents, according to inspection. Very little demand for extracted at from 4 to 6c. We advise the marketing of honey as readily as it can be judiciously sold. BATTERSON & CO.

San Francisco, Nov. 22.—White comb, 9½ to 10½c; amber, 7½ to 9c. Extracted, white, 7 to 7¾c.; light amber, 6¼ to 6½c. Beeswax, 24@27c

Stocks in this center are light and must so continue through the balance of the season. Choice extracted is especially in limited supply and is being held at comparatively fancy figures. Comb is meeting with very fair trade, considering that it has to depend mainly on local custom for an outlet Values for all descriptions tend in favor of selling interest.

Boston, Nov. 28.—Liberal receipts with but a light demand during the holidays. As a result stocks have accumulated somewhat, and prices show a lowering tendency, still we hope for a better demand with prices at present as follows:

Fancy white, 14c; A No. 1 white, 12½ to 13c; No. 1, 11 to 12c; light amber, 10c, with no call for dark. Extracted, fair demand, light supply: White, 7 to 7½c; light amber, 6½ to 7c; Southern, 5 to 6c. BLAKE, SCOTT & LEE.

Cleveland, Nov. 29.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

Indianapolis, Oct. 3.—Fancy white comb honey, 12 to 12½c; No. 1, 10 to 11c. Demand fairly good. Tar-colored comb honey, 8 to 9c, with almost no demand. Clover and basswood extracted honey, 6½ to 7c. Beeswax, 25 to 27c.

WALTER S. POUDER.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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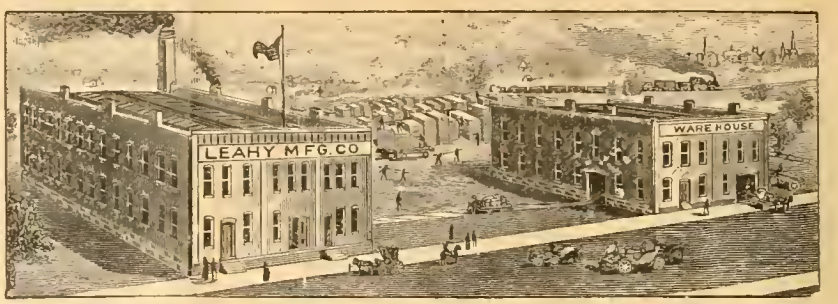

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Beeswax Wanted at all times. CHAS. DADANT & SON,
Please mention Bee Journal when writing. Hamilton, Hancock Co., Ill.

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FOR $1.75.

The above shows our very popular Outfit for repairing Boots and Shoes, Rubber, Harnesses and Tinware. 44 first-class, full-sized tools as shown in cut. Each set packt in strong wooden box and shipt by freight. It is only a little time since we sold these Outfits at $3.00 each, but we are now able to furnish them with Gleanings one year for only $1.75, or with the soldering and harness tools omitted for $1.50. Send for sample copy of GLEANINGS at once if you are not familiar with it. Our clubbing offers are still good, viz:

	Both 1 year for
Gleanings and Ohio Farmer	$1.10
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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JANUARY 12, 1899. No. 2.

CONTRIBUTED ARTICLES

Honey-Dew—Its Origin and Uses.

BY PROF. A. J. COOK.

ON page 581 (1898) occurs the following regarding the origin of honey-dew :

"Honey-dew, on the contrary, is a saccharine substance or sweet juice which at times, and under certain atmospheric conditions, exudes from the surface of the leaves of trees and plants."

This occurs, we are told, as an editorial in the British Bee Journal, from which it was copied. We all know what a reliable journal that is, and that its editor, Mr. Cowan—tho very likely he never saw this article at all—is a justly recognized authority on all such subjects. Yet I greatly doubt if this assertion is true. I know that all the dictionaries give a similar definition. They all assert that honey-dew is a product of both insects and plants. Even the very correct, and scientifically accurate Century, copies in substance the old definition, which, however, is corrected in part in a note from "Science."

That this definition should gain a place in our dictionaries, and might even have come from a scientist of high repute and recognized ability and accuracy, is undoubtedly true.

It is no uncommon thing that aphides—the source of very much of the so-called honey-dew—are located on certain branches of a tree—may be the topmost limbs. Yet their honeyed secretion is scattered and falls to lower branches, which are very likely the only part of the tree which comes under the observation of the pedestrian naturalist. He notes the nectar, and carefully searches for insects, which, of course, unless he climbs the tree, he fails to find. He concludes that this is a secretion—"exudation" from the leaves. He so states in a scientific journal of known repute, and his conclusion, tho wrong, becomes a dictionary definition, to be copied for years. An error, once in the dictionary, is very difficult to overtake and correct.

I once rode under some willows in Sacramento county in the '60's, the lower branches of which were sticky with honey-dew. I was on horseback, and carefully sought in the thick foliage for the aphides which I supposed were the producers of the nectar. I failed to find them on branches accessible tho I was on horseback and sought as far as I could from the horse's back. I concluded that the honey-dew was secreted by the willow leaves. I now have no doubt that if I had climbed the tree and examined all the branches I would have found plant-lice. I think this because I have often seen just such cases since.

Every summer since coming to California, in 1893, I have seen willow plant-lice located on a single limb, and that often high up in the tree. I have often noticed the same thing in Michigan.

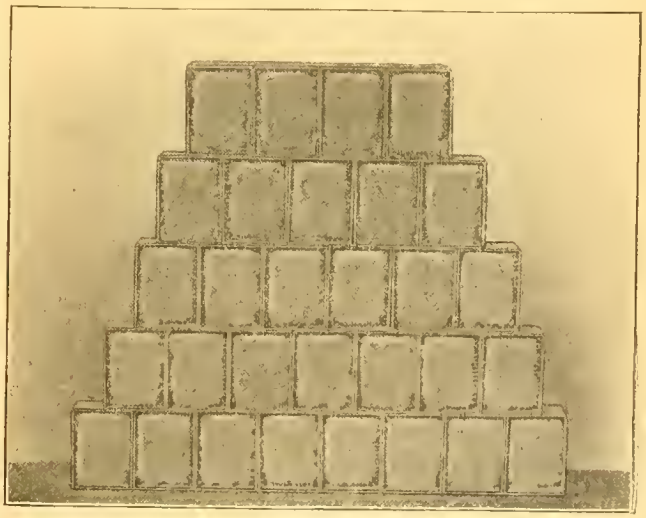
I have no doubt that most observing bee-keepers who read the American Bee Journal have frequently observed the same fact. We thus easily explain the origin of the dictionary definition. We likewise understand how difficult it is to correct any such error when once given circulation in what we all suppose to be only the repository of thoroughly authenticated facts.

I will now give my reasons for doubting the plant origin of honey-dew :

1. I have now carefully examined this secretion for years, whenever seen, and have always found either aphides—plant-lice; coccids—scab insects; other Hemipterous—bugs; or else larvæ of insects (these are reported to me) often working in scores- to be the source of this nectar. This gives strong presumption that such is always the source of honey-dew.

2. We have reason to believe, in the economy of Nature, that energy is never expended by plant or animal that does not in some way benefit by such outgo. We are easily able to see how the insects profit by the secretion of this nectar. They thus lure bees, ants, wasps, etc., to their immediate presence, and these in turn repel the birds which else would feed on and destroy the insects.

I once noticed an exhibit of this function in Michigan, so palpably displayed that to doubt it was impossible. The Lecanium tiliæ—a large bark-louse—was thick on a linden tree close beside my study window. In early spring the beautiful song-sparrow commenced to feed on the young



A Single "Ideal" Super of Tall Sections.

See Mr. Keeler's Article—page 19.

scale insects which thickly dotted the leaves. Suddenly the bees and other sweet-loving insects commenced to visit the same leaves for the honey-dew which dropt from the coccids, and the birds at once ceast to come. In a few days cold, or preferably nectar in other places, kept the bees and their companions from the place, and the birds again commenced their good work. This alternation of bird and bee visits occurred several times. Such observations make the value of the expensive secretion to the insects clearly evident.

On the other hand, the honey-dew always becomes foul with the black smut or fungus that attacks sweet substances on tree or bush. We can hardly doubt that it is a serious evil to the plants, and are unable to see any good that comes to the plant from it. I fully believe it is always harmful to vegetation, and I feel certain that plants do not originate it to their own hurt.

I referred above to certain acorn-infesting larvæ that secrete nectar. I have never seen them, but have often heard of such—principally from Missouri—so often that I think they may be more than a myth. Yet I am free to say that I should feel more certain if I actually saw them. I can see how oak-tree plant-lice, which are by no means rare, might lead to an erroneous conclusion.

Ergot—a fungus which attacks rye and other plants—is also said to secrete honey-dew. If this be true, then I feel sure that the sweet in some way benefits the fungus. If it does the fungus no good, then I believe it, too, has other origin.

I hope all readers of the American Bee Journal will closely observe this honey-dew, whenever they have opportunity, and see if insects are not always its source, and report their observations in these columns.

In California, where scale insects and aphids are so common, it is very easy to study the honey-dew, and the black, repulsive fungus, which our orchardists denominate "smut." The walnut tree, this season, has been infested generally with an aphid, and the honey-dew and smut have always attended it.

It is not to be inferred that this honey-dew is unwholesome. It is a secretion, and not an excretion. It has a similar origin to honey, and may be as delicious. Much Aphid honey-dew is deliciously wholesome, and the honey from it is superior. Most if not all of the coccid honey-dew on the other hand, is dark and of ill flavor, and its presence in honey, or as honey, is greatly injurious, and can never be sold for the table. I have sold it by the barrel for manufacturing. This was used to make cookies, and was said to be all right by the manufacturer. I explained all to him, yet he gave the ruling price.

Often this honey-dew is produced in exceeding quantities, and I have known it to crystallize on the plants, especially on pine and larch trees, so as to encrust them with white, and become very conspicuous.

Our conclusions, then, which we reach tentatively, are these: Honey-dew is always a secretion from insects. It is always wholesome, and often delicious. It may be produced in exceeding quantities, and become the source of much honey. In such cases, coccid honey-dew honey will often be rank and ill-flavored, and should be kept as much as possible by itself, and sold for other purpose than table use. Honey-dew is secreted by insects to serve them in attracting bees, etc., which shall repel the bird enemies of the nectar-secreting insects. Los Angeles Co., Calif.

Something About the Wintering of Bees.

BY C. DAVENPORT.

THE honey crop in this section the past season was lighter than that in 1897, but the quality of that I secured was much better, owing mostly to the absence of pollen or bee-bread in the sections, and this was largely due to precautions taken to avoid this serious source of loss that often occurs in this locality.

Mr. Herrick, of this State, made the remark in the American Bee Journal a short time ago, that there will be less bees in Minnesota next spring than there are now. I fully agree with him as to this, for I never cellared bees before in as poor condition as mine were this year. Their poor condition was owing partly to reasons or causes I do not understand, and in part to the fact that there was a drouth and consequent dearth of honey the latter part of the season, on account of which brood-rearing stopt earlier than I believe I ever knew it to do before. For this and other reasons colonies were, as a rule, weak. I doubled up a good many of mine, and have them in pretty fair condition.

The weather in November, up to the middle of the month, was so mild that bees were able to enjoy good flights at short intervals, but about the 20th, when mine as well as all others around here that I know of, were out yet, this section of the country was struck by a storm that the local papers say was the most severe ever known here for the time of year—it was 18 degrees below zero, with a most terrific wind. I was away from home at the time, on account of which my bees suffered much worse than they would if I had been at home, for the covers from many hives were blown off, others tipt over and off the bottom-board, and besides the intense cold the air was full of ice and flying snow, but no colonies perisht outright, altho with a few hives tip over, both cover and bottom-board were off, and it should be understood that they were exposed in this way from some time in the night until late in the afternoon, when I arrived. For owing to an accident, the man left in charge was unable to attend to them.

The most severe cold had not occurred yet, but before this affair took place it would have been hardly possible for me to believe that bees could exist under such conditions as some of these did. The colonies in the hives disturbed, as was to be expected, suffered a severe loss in bees—in some cases a third or more of their number perisht. I was not surprised at this, but was surprised to find a large loss of bees in many colonies, the hives of which were not disturbed in any apparent way by the storm. In many there were from one-half to one and one-half quarts, loose measure, of dead bees on the bottom-boards and between the combs. Other colonies no stronger, and in some cases much weaker, in hives as near alike as machinery can make them, lost hardly half a dozen bees.

The only way I can account for the loss is that the bees that froze may not have been with the main cluster, but the condition of the weather for two or three days previous, and the fact that the storm increast in severity gradually, and the large amount of dead bees in some colonies I deem it improbable that this wholly, if in part, accounts for it. But if this storm had not visited this section, I believe there would still be a large loss of bees here the present winter and coming spring, but this is only my opinion, for there are very many things about our pursuit that I know but very little about, and this is one of them.

A few years ago, however, under conditions that I fear were somewhat like this year, many practical bee-keepers in this State, or the southern part at least, had a large winter and spring loss of bees, owing, I believe, to causes or reasons unknown, tho many believed it was on account of colonies going into winter quarters with too large a percent of old bees, owing to the fact that colonies did not that fall have as large a percent of old bees as in other years, when there was practically no winter or spring loss. I can but believe that this had little if anything to do with it. One thing in favor of bees this winter is, that in my immediate locality, at least, their winter food, if natural stores, consists mostly of good clover and basswood honey, and I do not believe that being exposed to severe cold before being put into winter quarters would necessarily, of itself, warrant an opinion as to poor wintering, for I have sometimes left bees out late until they had been exposed to a number of severe cold spells, then cellared them, and in some cases I was unable to see but what they came through the winter and spring in as good condition as the average of those carried in early.

As an instance, I remember a number of years ago, 10 colonies in an out-yard were left over from the last load hauled home, and I decided to let them stay there all winter, and take their chances. But a week or so after New Years the weather became so bitterly cold that I changed my mind, and they were brought home and put into a cellar. Only one of these colonies died that winter or spring, and they had been exposed in single-walled hives to nearly or quite 30 degrees below zero, and without a flight since some time in the latter part of November.

The best authorities tell us it is best to put bees in, if they are wintered in-doors, before severe cold weather occurs, and this is undoubtedly the very best of advice; still, as I have shown, they will sometimes, at least, winter well under adverse conditions.

Before closing, I will relate an instance of bees enduring severe cold after they were put out in the spring in poor condition.

The previous fall I put in about 100 colonies with stores largely composed of honey-dew. About the first of January most of these colonies were badly affected with diarrhea, or dysentery, known by the hives being badly spotted. Towards the latter part of February there was a warm spell,

and one day the temperature being up to about 60 degrees, as I expected to lose most of them any way, about half of them were put out and had a good flight, and if any who think bees never spot clothes had been around I think they would have changed their minds, for not only everything in the vicinity, but the vicinity itself was badly spotted.

Very soon afterward it turned cold, and the temperature went down to about 20 degrees below zero, with a strong wind from the north, to which these colonies were almost wholly exposed. But altho they were unable to fly again until, if I remember rightly, sometime in the latter part of March, a small majority of them survived. Of the 50 colonies left in, about two-thirds of them died, either inside or soon after they were removed from the cellar.

Southern Minnesota.

Prefers the Tall Sections—A Report.

BY THADDEUS H. KEELER.

I SEND a photograph of a case of aster honey just as it came from the hive. The sections are the Ideal, 3⅝x5x1½ inches. The honey was capt as white as any clover or basswood I ever saw. I have fallen in love with the tall sections, and shall use no other than the Ideals.

The honey crop for this section has been the poorest I ever saw. I had a few over 100 colonies in the spring, and had only 8 or 9 prime swarms, and about 200 pounds of spring honey, gathered from clover with daisy or bull-eye honey mixt with it. It was capt yellow, and tasted about as good as a daisy smells. The fall crop was the best I ever had; some of my colonies filled two supers, the first coming from golden-rod, and finishing up on aster. The frost held off very late in this section.

The photograph shows one of two supers taken from one hive, being the last one put on the hive.

Westchester Co., N. Y.

Why Italian Bees Store Better Honey than the Blacks.

BY A. B. BATES.

IN coming to the front and telling why Italian bees store better honey than other bees when all have access to, and all store from, the same sources of supply, as Mr. Bevins requests, may not be easily done; nevertheless, it is so, all the same. "The taste of the pudding is the proof."

A great many facts exist without any knowledge of the causes that produced them.

A few years ago I had two colonies of blacks, located side by side, and, judging from observation, about equal in strength, or number of bees and energy. There was no difference observable in the working of the two colonies—one stored surplus honey and the other consumed the honey in store, and at the same time; if any difference, the one that stored the surplus honey contained the most brood to feed. Why was this so? An answer to this might result in an answer to the other. My opinion is, that the "reach" of a bee is a more important factor in the characteristic of a profitable bee than many of us are willing to believe.

It is presumable with me, however adverse in the minds or clearer lights in bee-culture, that where there is a meagre flow of nectar it lodges in the bottom of the blossom-cups, and while some colonies are as numerous in bees and are as industrious, they are unable to reach it, and, if conditions remained such any length of time would die of starvation, while colonies possessing longer reaches would be storing surplus.

Now with regard to the question. Honey is heavier than water, and as a natural consequence the richer of the saccharine substance would settle to the bottom, and while black bees during a copious honey-flow might store as much honey (less the weight of the evaporation of water it contains), the Italian bee having a longer reach cleans out the cup of the blosom-cell to the bottom, giving us not only a richer and finer quality and flavor from the same bloom, but the honey requiring less ripening or evaporation of water; the same quantity when first stored would result, in weight and bulk when ripened, largely in favor of the Italians.

My observation is that the same size comb when first stored by the Italian is more dense, needs less ripening, and is therefore heavier than that of the black.

I placed a 3-frame nucleus of Italian bees, one spring, on a stand by the side of a populous 8-frame black colony. The season was poor, and the result was the Italians increast to 18 frames (filling an 8-frame and a 10-frame hive), and gave me 83 pounds of honey; while the black colony did not store a pound of surplus.

The difference in the reaches of the two strains, in my opinion, was the cause of the difference of production, and is also the cause of the difference of the quality in favor of the Italians.

Franklin Co., Mo.

Honey as a Fat-Producer—Nuts to Crack.

BY DR. C. C. MILLER.

MR. C. WURSTER, page 782 (1898), wants me to tell about honey as a fat-producer. I don't know enough. I'm not a scientist; only a bee-keeper. Evidently Mr. Wurster has been looking into the subject, and if he has any new light, by all means let us have it.

My knowledge of nutrition from the standpoint of a physician was obtained a good many years ago, and in that time some things have been unlearned by the profession. I have always supposed that when the heat-producing elements were assimilated, and they were not needed for immediate use, they were stored as fat, providing everything was in normal condition. The theory that I must first lay

Dr. C. C. Miller.

up in my own body as fat, the fat of pork, before I can get any benefit from it as fuel, is something new to me. That only such elements as require extra preparation by the digestive organs can be laid up as fat is also new to me. Every farmer knows that corn is a good fattener. One would be inclined to suppose that the sugar contained in it and gotten out in the form of glucose ought still to be a good fattener. If all the honey and sugar one eats must be used up at once in producing heat, and none of it can be stored up as fat, isn't there danger sometimes of one being overheated when one has a big feast of honey? But if there's any new light, by all means let's have it.

A. W. Hart wants me to crack some nuts that he gives on page 782 (1898). I am left partly to guess at what he wants me to tell, and any answer I give must be largely a guess. If I could have seen both cases possibly I might do a little better guessing.

In the first case, the smaller bee was probably an ordinary worker that entered the cell and was shut in there. It happens rather often that after a queen leaves a cell a worker enters, and the other bees fasten on the lid of the cell as a practical joke on the bee inside—a fatal joke for

the prisoner. How that fully-matured dead queen happened to be in the cell, I don't know.

I can't quite understand the description given of the second case, but at any rate it seems that something came out of a cell, and afterward no queen could be found. It is barely possible that by some means the queen disappeared and a worker took her place; and it is possible that the queen was so poor she could not readily be distinguisht from a worker. McHenry Co., Ill.

Improved Frame Top-Bar for Fastening the Foundation.

BY LEWIS E. THOMPSON.

NOW and then some follower of a fraternal pursuit makes a discovery which he believes to be of value, but either from lack of means or selfish motives does not obtain a patent for his ideas. I may say that the following invention is publisht for both of these reasons.

Feeling, with the majority of bee-keepers, the necessity of a more secure way of fastening foundation into brood-frames, my father, Irwin Thompson, set out to study up a better way than the uncertain methods of sticking the sheets into the frames in grooves, or to the flat surface of the top-bar. The result was the best device he has seen or heard of—one that is practically secure.

A top-bar is made of the usual length, ⅞ inch wide and ½ inch thick. It is then sawed lengthwise in the middle to within one inch of the end. Thus the top-bar is in two pieces all the way between the end pieces of the frame. In nailing the frames together the end of the bar that has not been sawed through is nailed on as usual. At the end where the bar is in two pieces only one piece is nailed before the foundation sheet or starter is put in.

When the foundation is put in, the bar is spread open by pulling on the free end of the half of the bar which has not yet been completely fastened, until there is sufficient room all the way along the opening to the other end-bar to admit the foundation. (If the inch which was not sawed splits out no harm is done, for two nails have been put in at that end—one near each edge of the top-bar—and it is still fastened.)

When the foundation is in, the nailing of the other end of the bar is finisht by putting a nail in that end of the loose prong, the foundation having been prest between the two halves of the top-bar as in a clamp. Nails are then put through the bar edgewise to further secure the foundation.

My father has a form in which to lay the frame while putting in the foundation. There is a board the size of a full sheet of foundation and about ⅜-inch thick nailed on another larger board. This is to support the foundation while it is being fastened in the frame. The frame is laid flat with the thin board just fitting the inside, and with other pieces outside of the bottom and end-bars to hold the frame solid while the nails are put in. Erie Co., Pa.

A Hive-Tool—10-Frame Hives—Queen-Cages.

BY J. A. BEARDEN.

DURING a year of universal failure, such as this has been so far as bee-keepers are concerned, anything of especial economical value should have first notice, so it seems to me. Still, the main subject seems to be, Who has invented the best hive-tool? Hence, I will describe my invention, which is a piece of steel ½x1 inch, about 12 inches in length, with one end drawn out to about ½x½ inch, and sharpened sidewise like a screw driver, for moving frames. The other end is drawn out as wide and thin as possible with the end for the edge. But right here is where almost all of the hive-tools quit off. Mine is carried just a little farther, so this wide end is just turned at right angles to the main body or handle, and sidewise of the same, and then it is sharpened with the bevel all from the outside end, thus making a fine scraper for cleaning covers, hives, etc. Then the tool is relieved of all sharp corners on the handle, and rubbed generously with some emery cloth to smooth and polish, and you are all ready for work.

Of course this is not the best, but if any one can tell us an improvement let's have it, for the best is none too good.

The hive discussion has rather cooled down of late in the Bee Journal, still, the cooler times are close at hand with some; snow here just a few days back. It was the first snow I can recollect seeing in October, as I have always lived here in Lincoln Co., Tenn.

Still, the 10-frame hive beats the 8-frame in this county, and for this reason alone: When the fall flow of honey is taken, most bee-keepers take all the honey in the top stories or supers, thinking that the bees have enough for winter in the lower story, and of course the honey is all above. So the 8-frame hive, to accommodate a good-sized colony, must be three stories high, and when the top one is taken he says: "I'll bet that they have got plenty down below, for Mr. So-and-So always takes the honey out clean in all but the bottom story for winter."

But Mr. So-and-So has the 10-frame hive, of two stories, and the bees have filled out both sides of the brood-chamber with good, thick honey, that was carried above in the 8-frame hive. So if the bee-keeper is careless, or very busy, he would better get the 10-frame hive, but not with the Hoffman self-spacing frame, for goodness knows I don't need a frame that takes a quarter of an hour to remove from the hive; but I do want all of my frames to have the thick top-bar. Also, it is a good plan when putting frames together to use some small wire brads for nailing the bottom corners of frames crosswise, as they will be three times as strong as if they had been nailed into the end of the end-bar from the bottom side.

I don't know, or understand, why the manufacturers of supplies use wire-cloth for making queen-cages, for the perforated tin used by tinners for making molasses skimmers is much better. It is not very costly, is smooth and stiff, with plenty of ventilation, and so much better to get in shape, and keep in shape; and the holes are just the right size for a ¼-inch tack.

I don't want any more entrance-feeders, for they are good fuss-breeders, causing trouble where none would have happened if a feeder had been used on the hive-top, by getting the bees in the notion to rob one another.

Lincoln Co., Tenn., Oct. 30, 1898.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Dead Queen at Hive-Entrance—Camphor-Balls for Mothworms.

1. What is the best plan to pursue when you find a dead queen, at this time of year, at the entrance of a hive that has been packt for winter (on all sides except the front) on the summer stand?

2. Can camphor-balls be used in any way to keep moth-millers out of hives, by putting them under the roof, or above the enameled-cloth or quilt? Or can they be used to kill the wax-worm which may be in some frames of honey placed in empty hives and set aside for next season, or in cases of section honey? NEW JERSEY.

ANSWERS. 1. Let it entirely alone. You can't do any good by meddling with it now, and will be pretty sure to do harm. Just as likely as not the colony has a good queen, for a dead queen in front of a hive doesn't always mean that the colony is queenless. When bees begin to fly well in spring will be time enough to look and see whether any brood-rearing is started. If not, it will then be time enough to decide whether it is best to break it up and unite with other colonies (and the probability is that will be the best thing if it is queenless) or to give it brood in case it is strong, so as to coax it along till you can give it a queen.

2. No, don't waste time and camphor trying it.

Clover Questions.

Which is the best clover for bees, sweet clover, Alsike, or some other? How much should be sown on an acre, and when? What kind of land is best, and which is the best kind of grain to sow it with? What kind of feed does it make for cattle? Is wet or dry land necessary? IOWA.

ANSWERS.—Some of your questions hardly come within the scope of apiculture, but I can tell something about the

matter. For Iowa, probably sweet clover will yield more honey to the acre than any other clover. It is good for forage if your stock have learned to eat it. Some find the dry hay eaten more readily than the green clover. Some say they can't get their stock to eat it. It yields a large quantity of forage, and may be cut two or three times in a season. It yields honey after white clover has ceast yielding, and is valuable on that account. As an enricher of the soil it is excellent, and will grow on poor land or pure clay. Alsike is one of the finest for honey, coming about the same time as white clover. If you have plenty of white clover, it is not as valuable for you as sweet clover, but if white clover is scarce Alsike may be worth more to you, as there is no question about its value for hay or green feed. It is best on land not too dry. Sweet clover will stand wet or dry. Sow either one about the same as you would red clover, and with the same kind of grain, using a little less seed to the acre than you would where red clover is sown with no other grass seed.

Making a Straw Hive.

How is the old straw skep or straw bee-hive made? I always admired the shape, form and style of the straw bee-hive—that is, the illustrations of it, for I never saw a real one—and I should like to make or procure one, if one is to be had, just for novelty. MAINE.

ANSWER.—I suppose a band or rope of straw is made, coiled about and sewed together till the hive is done. But I'm no authority on straw skeps, and will yield the floor to John Kline or some other veteran. By way of a side remark, I may say that it is doubtful if your admiration for the shape, form, and style of the straw skep will remain as great after seeing the genuine article. Some things look best in pictures.

Sowing Clover for Late Bee-Pasture.

I want to seed some ground for bee-pasture. What kind of clovers would be best to sow—those that could be sown in the spring and blossom in the fall so that the bees could work on them before cold weather? ILLINOIS.

ANSWER.—Probably no other clover is so good for late nectar as sweet clover. But it will not blossom the same year it is sown. It blossoms the next year, then dies, root and branch. You can manage, however, to have it blooming on the same ground every year after the first year. Sow in the spring, and then sow again on the same ground in the fall or the next spring, and it will re-seed itself thereafter. By cutting it before it is budded for blossom, or just when it first shows buds, you can make the main yield come later, which is an advantage where you have a crop of white clover. Alsike may be made to bloom tolerably late by cutting early enough. Very likely you may find Alsike to suit you better for hay and pasture, unless your stock has been taught to eat sweet clover.

Section Honey Over Old Brood-Combs.

Would a good quality of comb honey be produced (without fishbone) by hiving a new swarm on old combs with full sheets of extra-thin foundation in sections?

I have two colonies and do not desire more. I will reduce each to four frames and unite when the queens have filled the combs with brood. I will have the honey extracted from eight frames, and desire, if practical, to use the same as stated above. Of course, I would not care to jeopardize the quality of the product, and hence ask advice. Last season I used part of the sections with starters, and part with full sheets, and consider those with full sheets the nicest to look at. In answering, consider one season with another, and average, as I realize that results might vary under changing circumstances. CONNECTICUT.

ANSWER.—I suppose the emphasis in your question lies on the old brood-combs and the full sheets in sections. Much the larger part of all the fancy honey that is produced is probably produced with old combs in the brood-chamber. I know that I have produced some such honey over brood-combs black with many year's use, and wouldn't think of displacing those old combs, altho there may be a little advantage in having brood-combs that are entirely new, especially if the sections should be left on too long. When left on long, a little of the darkness is likely to be carried up to show on the cappings of the sections, but if taken off as soon as finisht it is hardly likely that you would notice the difference between sections produced over old and new combs. There is some difference of opinion as to whether full sheets or starters should be used in sections. In my own practice I prefer the full sheets.

Sowing Sweet Clover and Alsike.

When is the time to sow sweet clover seed? How much to the acre? How do you prepare the ground? Also, how and when is Alsike clover seed sown? INDIANA.

ANSWER.—Sweet clover may be sown any time after the seed ripens in the fall till late the next spring. Perhaps the very best way to make sure of a good stand is to sow on hard ground and let it be thoroughly trampt in the ground when the ground is wet. That's the way it's sown on the roadside, and it seems to flourish nowhere better. You may also sow in cultivated ground the same as red clover, only if sown shallow in mellow soil it is likely to heave badly in the winter. If covered rather deep, or if the ground is rolled down pretty hard, heaving will be avoided. Sow Alsike the same as red clover, only half as much seed will do.

Preparing and Shipping Bees.

1. Can bees be shipt in less than car lots?
2. Tell me just how *you* would prepare bees to be shipt from Texas to Wyoming.
3. When would you ship the bees? TEXAS.

ANSWERS.—1. In some parts of the country they can be shipt as freight only in car lots. Your station agent will tell you how it is on your road. Of course, a single colony can always go by express.

2. If only a small number, each one should have wire-cloth covering entire top of the hive, and raised several inches above the frames. In any case there should be some plan to provide plenty of air, depending somewhat on the kind of hive as to preparation.

3. Not till the weather has become warm enough so the combs will not break easily. In freezing weather they are brittle and will break with very little provocation.

Sawdust in Double-Walled Hives.

Will sawdust put between the walls of a hive be as good as chaff? SUBSCRIBER.

ANSWER.—Sawdust is not generally liked as well as chaff. If you use sawdust, be sure to have it very dry. If you get sawdust at a planing-mill, you can also get planer-shavings, which are well liked for packing.

A Colony Feeding Caged Queens.

Can a queenless colony of bees be depended upon to feed the queens kept in West cages, or is it necessary to put feed in the cages? TEXN.

ANSWER.—I think it will not be necessary to put feed in any cage which allows the bees of a queenless colony a chance to feed a queen. At one time I kept young queens in a series of cages something like a top-bar, every two inches of the top-bar containing a queen, the whole being placed over a queenless colony, and I think I never knew any of the queens to be starved. I have also kept caged queens in a hive with a laying queen, and generally they are fed, but sometimes I've found a queen dead in her cage.

Loose-Jointed Hive-Bottoms and Supers.

I have a lot of dovetail or lock-cornered hives with Danzenbaker covers and bottoms. The bottoms are in three boards, square joints, which swell and shrink, leaving cracks that can be seen through. The supers have a strip of tin tackt on the ends for the section-holders to rest on, leaving cracks on the sides when set on each other, or on the hive. Is that good enough? MISSOURI.

ANSWER.—I should prefer to have all close, still no serious harm can result, unless it should be that the bees are to be hauled and the cracks are large enough for them to crawl through.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

The 19th annual convention of the Colorado State Bee-Keepers' Association was held in Denver, Nov. 30 and Dec. 1 and 2, 1898.

On the morning of the first day the convention adjourned to the horticultural rooms to hear addresses made before the Horticultural Association, then in session, by Pres. Alston Ellis and Prof. C. P. Gillette, both of the State Agricultural College.

Prof. Gillette's subject was, "Spraying to Destroy Insects Injurious to Fruit;" and in the course of his address he referred to the spraying law, adding that it did no good whatever to spray during bloom, but that it was better to wait several days or a week after the blossoms fall.

The first event of the afternoon session was a paper by Ben Honnett, on

The Bee-Industry of Colorado.

It seems almost like going into the speculations of fairyland to review the bee-industry. There is nothing more fascinating than bee-culture, to my mind (I might except prospecting), from the fact that you may trace the progress of a colony of bees from the time of swarming to its continued succession, and until the result in honey is removed for storage or sale. One becomes in a manner personally acquainted with each and every colony, noting their individual peculiarities as they progress. The most critical observer will note the fact that success in bee-culture means unceasing care and watchfulness.

The location of an apiary is of paramount importance. The hives should be raised from the ground, a few inches being sufficient to allow air to circulate and prevent dampness. As to the position of the hive—east, west, north or south of the entrance—it is a matter of taste, and plays no important part. The main point is to have the hive fairly sheltered, that is, the hive to have some shade during the hottest part of the day. The ideal location should be one or two hives under each apple tree in an orchard (or any other kind of tree). The feeding-ground should be near an alfalfa field, and where sweet clover abounds, our main dependence being on these plants, and on fruit-blossoms. Very little sweet clover is planted for bee-forage, and this is lookt upon with disfavor by the farmers of Colorado. So far as it claims to be a honey-plant, I believe there is none superior. I would rather have an acre of sweet clover for honey purposes than two acres of any other kind of forage.

The habitat of the bee is wherever nectar is to be found, be it much or little. I met bees on the top of Cottonwood Mountain in 1884, when there was no known apiary within 60 miles of the place. The main apiaries are located in the St. Vrain, Big Thompson, Cache La Poudre, Boulder Valley, Arkansas Valley, Arapahoe and Jefferson counties, and in Mesa, Delta, and a few other counties across the range. There are other isolated localities where apiaries exist, but the above-mentioned furnish most, if not all, of the marketable honey.

Those who make a specialty of the business are as a rule wide-awake, intelligent and progressive, catering to the wants of the markets without sacrifice or detriment to the continuance of a well-regulated apiary.

I would right here sound a warning note to the inexperienced, to be careful how they follow the advice of some individuals whose names appear semi-occasionally in the press, recommending semi-invalids to engage in the bee-business, as being light, profitable and healthy. I know of many who have found the bee-business both *light* and unprofitable, and not so very healthy. It takes persons with their five senses about them to conduct an apiary successfully, altho all must begin sometime; but it should be on a small scale, and then only in connection with some other pursuit.

The result of this season's honey-business is far from satisfactory. In very few cases was there a full crop, some reporting half a crop, some one-fourth of a crop, and a few no return of surplus. The different localities give various reasons for the shortage. In this section (this side of the range) in May we had frequent showers and cool weather, which interfered materially with the bees flying; then followed severe drouth, which affected the secretion of nectar to such an extent that some of our bee-keepers put their apiaries in winter condition several months before they did last year, there being no late flow. The same trouble existed to a certain extent across the range. Cold nights and rains early in the season produced the same results in many localities.

The quality of the honey crop of 1898 is exceptionally fine. The product of the State for the year 1898 will approximate 700,000 pounds. The demand for Colorado honey far exceeds the supply. Denver, in proportion to population, consumes more honey than any city in the United States.

Altho some have not realized their expectations, nevertheless we must not lag or fall out of the ranks. The future looks bright. The price of honey is fair, and we hope that the next season will meet us again as of yore, ready to assume those responsibilities which fall to our lot in upholding the good name of the Colorado bee-keepers.

BEN HONNETT.

SWEET CLOVER—FOR AND AGAINST.

Mrs. Washburne—How do you reconcile the advantages of sweet clover as a source of honey with its disadvantages in the field, to the farmer?

Mr. Honnett—Agricultural stations are disseminating the idea that alfalfa should be cut early, and it is done to some extent. We must have a permanent source of honey. Sweet clover is carried by ditches to all parts of the farm. On the other hand, it has destructive effects on grain crops. It has so many seeds. Above Arvada is an 80-acre tract containing some wheat, in which sweet clover is a terrible detriment. Millers object to the sweet clover seed. Stock will not eat it except when it is young, and then is when we don't want them to eat it. There are some threats of legislation to put sweet clover among weeds.

F. Rauchfuss—Such a law could not very well be carried as long as the agricultural stations recommend it for renovating soils and for hay, especially in Utah.

D. Moon—I kept sowing it until I had four or five acres. It does not hurt the first season, and does not bloom then. The next season it goes to seed. My stock sometimes eat it off entirely. I had it on heavy clay five years, then raised the finest crop of corn I ever saw on that land. Some seasons the bees don't get much honey from it.

Mr. Adams—I have had 20 years' experience with sweet clover, and fed tons of sweet clover hay.

Mr. Honnett—I said that stock would eat it when young.

Mr. Adams—I don't know how young it has to be to be eight feet high, but I have seen that height all eaten off. Why should not the wagon-roads be utilized by growing sweet clover? I know of a large pasture of sweet clover that never gets higher than 6 inches to 2½ feet, as there are enough cattle to eat it all. I have never known stock to have the hooven by eating it, tho they do in the East. As for its injuring grain, that depends on the farmer himself. It won't get high enough the first year, and after that it only does injury if the farmer doesn't plow properly. But it does not harm *our* crops. *We* don't consider it a weed. It cannot be beaten as a green manure. It is better than alfalfa.

Mr. Honnett—I stated that I would rather have one acre of sweet clover than two acres of any other honey-producing plant.

R. H. Rhodes—I question the amount of the sweet clover honey product. We never have any distinctively sweet clover honey in our locality. But it is the best kind of a fertilizer, and makes one of the best fall pastures. I am acquainted with a cattle man who sowed a patch of wet land to sweet clover. He never had any pasture equal to it. It grew 14 feet high. It is a marvel of feed—if only taken care of. It is one of the best adjuncts to a stock farm. Another cattle-man says, "Give me sweet clover more than all other weeds." There is nothing better for preparing the land for potatoes. Put on a log-chain and a four-horse team to plow it up.

L. Booth—I believe the bees do get a good deal of honey from it.

Pres. Aikin—A year ago about one-fourth or one-third of my crop of honey was from sweet clover. The past season it was about two-thirds from sweet clover. I believe it is a good honey-plant.

The minutes of the previous meetings, of the proceedings of the Executive Committee, and of the joint committee of the State Association and the Denver Bee-Keepers' Association on marketing, were then read by the Secretary, and approved.

Mr. C. B. Elliott, the chairman of the committee on marketing, then read his report, as follows:

REPORT ON MARKETING HONEY.

Our committee, with a like committee from the Denver Bee-Keepers' Association, after weeks of labor, and a very careful canvass of this question, concluded that in our judgment the most feasible plan of co-operation in marketing honey was in the formation of a stock company, as outlined on the back of this sheet (which is hereby made a part of our report).

Your committee sent out nearly 300 of these circular letters to bee-keepers throughout the State, at an expenditure for printing, postage, etc., of $10.90. These circulars were sent out about the first of June. Up to the first of August the committee had received returns from 25 of the 300 circulars sent out, with a guaranteed subscription of stock to the amount of $160. Of this amount $55 was from certain members of our committee, leaving $105 from bee-keepers not members of either committee. Of the full amount of $160 subscribed, two-thirds was subscribed to be paid in honey, the balance in cash. With such a showing before us, your committee concluded for the present at least to abandon any further efforts in this work.

We very much regret that we are compelled to make such a report, realizing, as we do, the necessity of, and the advantages to be derived from, such an organization.

State Committee	C. B. ELLIOTT, J. E. LYON, W. W. WHIPPLE, J. N. PEASE.	*Denver Committee*	R. C. AIKIN, W. L. PORTER, H. RAUCHFUSS.

Mr. Elliott then read the circular letter referred to. It was proposed therein to form a stock co-operative company to be called "The Colorado Bee-Keepers' Exchange," to be capitalized for $5,000, to be divided into 1,000 shares at $5 per share, which would give a commercial standing with a fair rating, each share of stock to have one vote, with no voting by proxy; governed by a board of five directors, with a full set of officers; none salaried except those in charge of the company's store-rooms. It was the intention to derive no pecuniary profit other than advancing and maintaining the price of honey; to see that all honey was properly graded; to have a trade-mark, and affix it to all approved crates and packages, both comb and extracted; and to liquefy and repack all extracted honey in some uniform package.

Mr. Honnett—How much honey was shipt from the State this season?

F. Rauchfuss—Eleven carloads of 1,008 cases to the car, besides a number of local shipments from Denver of 25 to 100 cases each.

Mr. Honnett—I was askt if I did not over-estimate in stating the product to be 700,000 pounds.

F. Rauchfuss—No, that is too low.

Pres. Aikin then exhibited several samples of the "German Fibre Package," made by a company in Michigan. It resembles light-brown glazed pasteboard in appearance, and ranges from small sizes up to those large enough to hold 20 or 25 pounds of honey. Mr. Aikin had tested one by filling it with cold water, and letting it stand two weeks. It was not affected in the least. Another, submerged in hot water from 100 to 130 degrees in temperature for eight or ten hours, gave away at the joints. Honey does not affect them. Mr. Aikin had not tried liquefying honey in them by dry heat. They are a little cheaper than lard pails, and fasten with a lid in the same way, but the sides are vertical.

[Continued next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

MR. ORVILLE JONES, of Ingham Co., Mich., wrote us Dec. 15 that the bee-keepers in his locality had a fair honey season in 1898.

* * *

THE LEAHY MFG. CO. wrote us as follows, Dec. 28:

"We are now, and have been for two or three weeks, running our plant 18 hours a day. It now looks as if we will all have a good trade again."

* * *

MR. E. G. MONEY, of Albemarle Co., Va., wrote us Dec. 14: "It gives me much pleasure to renew my subscription to the American Bee Journal. I consider it more than worth the money."

* * *

MR. JOHN SUTER, of Seneca Co., N. Y., sent us $1.00 for the Langstroth Monument Fund, Dec. 17. We hope many more will follow his example—enclose something for that fund when renewing subscriptions.

* * *

MR. N. E. FRANCE, State Inspector of Apiaries for Wisconsin, will speak on bee-culture at the Farmers' Institute to be held at Waukesha, Jan. 13. He has been speaking at some institute nearly every day so far this month. Mr. France understands his subject, and knows how to present it.

* * *

"DOOLITTLE is sick in bed with the grip, hence his articles will be delayed till he is better." So wrote Mrs. Doolittle, Jan. 2. We sincerely hope our sick friend will very soon be up again. Bee-keepers can't afford to have Doolittle in bed more than just long enough for him to get the necessary sleep and rest—about eight hours of each 24.

* * *

MR. DAN CLUBB, of Tulare Co., Calif., has sent us a copy of his local newspaper that copied the whole editorial found on page 728 (1898), entitled "The Union and Comb Honey Lies." It made almost a column in the newspaper. That is a good idea. Try to get your local papers to copy such things from the Bee Journal whenever you can. It will all help to undo the mischief done by the oft-repeated falsehoods concerning comb honey that have appeared in the past.

* * *

MR. H. R. BOARDMAN, in a very interesting account of a visit among bee-keepers, reports in Gleanings that he found in Lansing, Mich., J. H. Larrabee, formerly so well known in bee-circles, engaged in the bicycle business, and he finds it more reliable than bee-keeping, which he has about given up. A. D. D. Wood, who went to California to rear queens on the isolated island of Catalina, he found in a smith-shop before a hot fire, where he could not stop, even to talk bees.

* * *

MR. THOS. W. COWAN, editor of the British Bee Journal, wrote to his paper from California, Nov. 16, expressing his own and the thanks of his family for the many expressions of tender sympathy received on account of the loss of their son and daughter in the wreck of the Atlantic liner Mohegan, as announced in these columns some two months ago. Mr. Cowan, in speaking of their sorrow, wrote this beautiful paragraph of trust and submission:

"At first our trial did seem almost overwhelming, but very soon we were able to recognize our Father's loving hand in it all, by the assurance He sent us that all was well with our dear ones. Their bodies were so quickly recovered absolutely unharmed by the cruel rocks they had been tost among, and the beautiful look of holy calm upon their faces testified that they had died as they had lived, and to their entrance into Glory, so that we could not but feel that, altho taken from us, they were present with the Lord. So our hearts were comforted, and we felt indeed that they were not lost, but gone before."

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

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ONE DOLLAR A YEAR. SAMPLE COPY FREE.

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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GEN'L MANAGER AND TREASURER Eugene Secor, Forest City, Iowa.

VOL. 39. JANUARY 12, 1899. NO. 2

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Dot Diagram Contest that we run during December, 1898, closed Jan. 1, as announced. Next week we expect to be able to give the result.

General Items department of the Bee Journal is suffering from an overplus of contributions, and those who have so kindly sent in reports will please be patient, as we expect to accommodate all as rapidly as possible.

Only 16,000 Copies of last week's American Bee Journal were printed. We presume that was the largest single edition of any bee-paper ever issued in this country. Of course, we will use a good many of them for sample copies during this month. With the present improved appearance of the old American Bee Journal, and the rich contents that it will have this year—well, we believe it deserves just about double its present circulation, and ought to have it in a very few months.

Not a Candidate. A letter received from Hon. R. L. Taylor, of Lapeer Co., Mich., dated Jan. 5, reads thus:

FRIEND YORK:—If convenient will you say in the American Bee Journal for next week, that I am not a candidate for President of the National Bee-Keepers' Union for the coming year, and cannot act as such.

Fraternally yours. R. L. TAYLOR.

The readers of the Bee Journal who are voting members of the Union mentioned, will please note Mr. Taylor's announcement. He usually means what he says.

Inventive (?) Beginners in bee-keeping are often imprest with the idea that they ought to get up a better hive than was ever invented by all the learned bee-keepers that existed before them. Strange that the bump of invention of some people develops so rapidly when once they become bee-keepers. But it is even so, for the United States Patent Office records show that nearly 1,000 applications for patents on hives have been filed in this country. And yet perhaps less than a half-dozen of those hives were of any permanent value.

Mr. U. Gubler, a noted European bee-keeper—and evidently a sensible one—offers this advice to beginners, in a late issue of the Revue Internationale:

"The bee-keeper who knows how to handle tools likes to try to make his own hives, and therein we have only words of encouragement. But let him confine himself to systems approved by the experience of our masters. Refrain from a tendency to make new things, to introduce pretended improvements, before knowing thoroughly the nature of the bee and its needs. The hives that we possess are the result of the studies, the experiments, and the discoveries of a great number of bee-keepers and experts of all lands; and to desire to make new is simply to render one's self liable to pay dearly for the experiments that others have made before us."

The Roll of Honor mentioned last week as being originated by Gleanings, began in the number of that paper for Jan. 1. There were 17 names as a starter. Quite a number of them refer to the American Bee Journal as being where they first saw the writings of Mr. Root. And that reminds us that nearly all the bee-papers that have been started in this country, and that amounted to anything, were practically built up on the American Bee Journal as a foundation. We could name several bee-papers of to-day whose editors gained a reputation by first writing for these columns, and thus "getting in" with bee-keepers who read.

Whether it is an honor or not, it seems to be true, that the old American Bee Journal has been used quite often as a stepping-stone by those who aspired to fill an editorial chair in bee-journalism.

And yet, after having lighted other apiarian torches, the "Old Reliable" appears to shine undimmed, if not with more resplendent lustre than ever before.

The Langstroth Monument Fund.—Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Union, has undertaken to help push through to a finish the laudable work of raising the fund for the erection of a suitable monument for the lamented Langstroth—the Father of American bee-keeping. We have received this communication from Mr. Secor, which we trust will be carefully read by all our subscribers:

FOREST CITY, IOWA, Jan. 2, 1899.

Having been placed on the Langstroth Monument Committee, I wish to make this final appeal to the bee-keepers of America, before erecting the slab that is to mark the resting-place of the most noted character and best-loved bee-keeper in our country.

It seems to me that if we neglect this opportunity to do honor to his name we shall always regret it.

Bee-keepers ought to esteem it not only a matter of loyal duty, but a loving privilege to contribute to a suitable monument to one whose services to American apiculture have been so universally acknowledged.

It is one of the strange things in this world, that very often the inventor of useful appliances fails to receive the rewards due to his genius. Thus it was in Langstroth's case. He builded, we occupy.

The world now recognizes his services, but robbed him of the material fruits thereof when needed.

Will this generation be satisfied to let him lie in an obscure or forgotten grave when it is understood that the ingratitude, selfishness, and cupidity of jealous rivals

darkened for a time the lustre of his achievements, and marred the happiness of a grand good man?

The committee has in preparation an inscription to be engraved on the monument, which recognizes the great services rendered by Father Langstroth, and which attempts to pay loving tribute to his memory. It is to be dedicated to him by the bee-keepers of America.

It is neither just nor wise that a few men should erect this memorial, when every one interested in bees or bee-keeping is reaping the fruits of Langstroth's genius.

A large number of subscriptions in amounts not to exceed $5 each would be a better recognition than a few large contributions.

If every reader of these lines who has not already done so would immediately send in his or her contribution to this fund, it would relieve the committee from the embarrassment of erecting a monument which they feel is in no sense an adequate expression of the admiration and love felt for the Father of American bee-keeping.

The committee will proceed in the spring to erect such a memorial slab as the funds in hand will warrant, and if the reader does not in the next few weeks send in his mite, he will miss the opportunity and privilege of being counted as one of the donors. Sincerely,

EUGENE SECOR.

Now let all who have not already done so, send their contributions to Mr. Secor, or to the American Bee Journal office if more convenient. If sent here, we will forward to Mr. Secor, who will send a receipt for all moneys received. Better attend to it very soon, and not be left out of one of the best opportunities of your life to show honor to one of the noblest men of this greatest of all centuries.

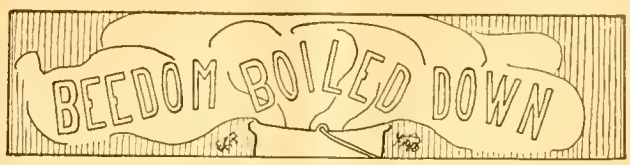
Testimonials which speak in high praise of the American Bee Journal and its editor's humble efforts have just poured in upon our desk the past month or so. Why, we never saw anything like it before. To say we appreciate all the expressions of appreciation of our work is to put it very mildly. But we can hardly feel that we merit them. We should like to print all the kind words that have been sent us, but that would be utterly impossible. Please accept our sincere thanks for such kindly expressions.

The Bee and the Horticulturist is the title of an address delivered by Editor Abbott before the Missouri State Horticultural Society, and publisht in his paper, the Modern Farmer and Busy Bee. It is an able discussion of the relation of bees to horticulture, and the delivery of such an address before the leading horticulturists of a State cannot fail of bringing good results. Editor Abbott is doing no little to spoil General Manager Secor's chances for paying lawyer's fees in Missouri.

The National Bee-Keepers' Union.—The 14th annual report of this organization, for 1898, is on our desk. We hope soon to be able to publish the principal part of it, which shows that General Manager Newman had the usual number of troubles to settle during the past year. And the usual success seems to have attended the undertakings of the old Union. We notice the membership for 1898 was 149, and that there is $170 in the treasury.

York's Honey Almanac will hereafter take the place of our "Honey as Food" pamphlet. The new pamphlet contains 32 pages, with regular almanac pages, and a neat calendar for the year 1899 on the front cover page. Send a two-cent stamp for a sample, to the Bee Journal office. It is a neat honey-seller, and will be preserved by all who get it.

Apiculture as a Branch of Agriculture is more and more recognized. The December number of the Ruralist is chiefly occupied with bee-culture, J. O. Grimsley being the regular conductor of that department.



A Separator-Cleaner is mentioned in the Progressive Bee-Keeper by F. L. Thompson, which cleans the separators "by simply drawing them through between two knives made of files, held pretty firmly together by springs and a treadle, so that both sides are scraped at once."

Don't Place Bees Along a South Wall.—L. P. P., in Revue Eclectique, gives a sad experience with bees placed against a south wall. The hot sun beating on the hives, with the additional heat reflected from the walls, melted the combs of a colony into a heap. A north wall is safer.

Bees in a Bag.—In moving bees, D. L. Shangle puts most of the bees in a two-bushel bag with a screen bottom to give air, and also to feed if the bees are confined long. After the journey, the bees are returned to the hive. He finds this safer in hot weather than to have them crowded in the hive.—Gleanings.

An Uncapping-Box that gave great satisfaction to Rambler is thus described in Gleanings: "It was five feet in length by about 18 inches wide, six inches deep, with a wire-cloth bottom. Set at an incline it would hold the cappings for two days and drain them nicely. I like an uncapping-box of this shape. It does not require frequent removing of the cappings. The cappings of to-day can be spread out in the evening and drain out all night; then the next morning these cappings can be crowded to one end of the box for further draining through the day, and removed at night to the sun extractor."

Bees Dying on the Snow. G. M. Doolittle says if the cause is diarrhea, the bees might as well die on the snow as anywhere. If from the sun shining in the hive, put a board before the entrance, and its shade will prevent the bees from coming out until it is 45 degrees in the shade, at which temperature, if still, and the sun shining, the bees can rise from the melting snow. Novices are unnecessarily alarmed at seeing dead bees on the snow, many of such being brought out of the hives by the living bees when the weather allows house-cleaning, and 100 bees make more show on the snow than 10,000 on the bare ground.—Gleanings.

Fast Work at Extracting Honey. Giraud-Pabou, being somewhat skeptical as to F. Boomhower's report of 1,800 pounds of honey extracted in three hours by two men, wrote to Mr. Boomhower, in New York State, asking how it was done, which reply convinced Mr. Pabou there was nothing incredible about it. Mr. B. puts Porter escapes under the supers in the evening, supers of combs are taken from the apiary on a wheelbarrow, honey extracted before sealed, a four-frame reversible Cowan extractor used, and the honey ripened in a tin tank. One colony produced 400 pounds of comb honey, largely from red clover, and an apiary of 70 colonies produced four tons of comb honey.—Revue Internationale. An average of 114 pounds of comb honey is not bad for the season of 1898.

Fences and Plain Sections—Ten pages of Gleanings for Dec. 15, 1898, are taken up with a symposium on fences and plain sections. The editor strongly favors them, and thinks the adverse reports are due to the faulty construction of supers or fences. Cross-cleats were made by some ¼-inch wide, by others ¾. The Roots struck a golden mean, but found it was a mistake, and now have adopted 5-16. The thickness of the cleat has been reduced from 2-12 to 2-13, in order to be on the safe side. The editor is convinced of his mistake in believing that the separator should come flush with the top of the section, and the 1899 fence will drop ¼-inch below the top of the section. J. E. Crane says bees finish sections toward the close of season more rapidly with the fence than with the old-style separator. He found that sections, whether plain or old-style, when used with the fence, were filled of such even weight that they could be sold by the piece more satisfactorily than sections with old-style separator. F. L. Thompson used sections and separators of both kinds in the same super. More pop-holes could

be counted in the old, but in appearance there was no difference, and he pronounces the fence a failure. He thinks the scheme of doing without separators altogether more promising than that of using fences. Glue didn't hold his fences. The objections made in the Canadian Bee Journal are mentioned, and the American Bee-Keeper is credited with having been fair, altho taking a somewhat neutral attitude. Editor Root gives half-tones of two of the late Mr. Morton's fancy honey, "life size," that are fine as pictures; also a picture of eight old-style sections that are fine, for which he says he hunted long and hard; and a picture of four of Danzenbaker's 1898 fence honey.

How Much Heating will make Foul-Broody Honey Safe to Feed?—Dr. Miller advised not less than 150 minutes. R. L. Taylor thought 15 minutes enough. Editor Root, less definite, advises boiling "several minutes." Dr. Miller, in Gleanings, gives his reason for not feeling safe with boiling so short a time. Prof. Mackenzie heated spores of foul brood to 212 degrees, and kept them at that point for two hours, and then secured growth. In other words, two hours' boiling did not destroy the spores, and the doctor says: "While not inclined to dispute in the least that you may have safely fed infected honey that had less than 15 minutes' boiling, with my present light I don't feel safe to advise anything less than boiling 2½ hours."

Hives.—In discussing in the Progressive Bee-Keeper the right kind of a hive, R. C. Aikin favors the shallow divisible brood-chamber, two or three sections, each 15 inches square and five inches deep. Doolittle follows, and says this is theoretical bee-keeping, for Aikin has not had experience with these shallow chambers, and by the time he has had as much experience as Doolittle he will not favor them so much. Doolittle says he has modified his views somewhat as to the size of hives. For 20 years he managed successfully the smallest brood-chamber in existence, averaging nearly 100 pounds of comb honey annually; but having purchast an apiary with 10-frame Langstroths which he has workt in an out-apiary, he thinks he would now prefer the 10-frame Langstroth to the 9-frame Gallup where cellar wintering could be practiced. For five years he has had hives larger than 10-frame Langstroths, but sees no advantage in them.

Saving Strayed Queens.—It sometimes happens in taking off supers that a queen will be taken with the bees that remain in the super, and if several such supers have been piled up together it is not easy to tell whence the queen came. Fred S. Thorington had an interesting experience in that line. He put the cluster of bees out in the open air without protection in the day, covering them with a blanket at night, leaving them without food. Two days later they circled in the air like a natural swarm, and went to what he supposed was the hive the queen came from. The idea seems to be to let them swarm like a hunger-swarm, and trust to their going back to their own hive. The only question would be whether, in a case where the workers came from a number of different hives, they might not return to the hive from which a large number of workers came, thus taking the queen to the wrong hive.—Progressive Bee-Keeper.

A Section-Cleaner made by John S. Bruce is thus described by F. L. Thompson in the Progressive Bee-Keeper:

"The framework is the same as that of Mr. Aspinwall's, but the roller, about two inches or over in diameter, consists essentially of a rasp made by punching holes in a sheet of tin with a ¼-inch fine chisel. The center is a core of wood, and between the wood and the tin rasp are T tins, forming a number of little alleys into which the propolis falls, and is puncht out occasionally with a wire. The superfluous roughness is taken off the rasp by turning it with a file until it has acquired just the right degree of cutting surface to remove propolis and do smooth work. On the same level with the roller is a knife made of an old file, which, when the section is past along to the rasping roller, first cuts away any large-sized chunks of propolis or wax. It is so near to the rasp that one end of the section is passing over the rasp before the other has left the knife; and on the other side of the rasp is another roller, covered with emery-cloth over felt, also quite close to the rasp. All being on the same level, the section passes over the knife, the rasp, and the emery-cloth, at one operation and one sweep. The edges are cleaned just like the sides, strips between and on each side of the rollers forming a table above the level of which the rollers slightly project."

United States Bee-Keepers' Union.

General Manager Secor's report for 1898, which is in the hands of the members, reads as follows:

Report of the General Manager for 1898:

FELLOW BEE-KEEPERS:

It is considered one of the legitimate purposes of this Society to promote legislation in the interest of bee-keepers.

Acting on that idea the Executive Committee appointed three delegates to attend the Pure Food Congress, held in Washington, D. C., beginning March 2, 1898. The delegates consisted of E. T. Abbott, of St. Joseph, Mo; Dr. A. B. Mason, of Toledo, Ohio; and your humble servant, the General Manager.

The object of the Pure Food Congress was to unite all producers and all manufacturers of food products, and all societies and people that believe in the necessity or desirability of protecting the public against adulteration and misbranding of every article intended for food, drink or medicine, consumed by man.

Believing that in no other way could this society so speedily and effectually bring about the results it is seeking to achieve, Mr. Abbott and myself attended that convention.

We were greatly pleased, not only with the number of delegates present, but the representative character of the men: Scientists of national reputation; leading physicians and pharmacists; pure food commissioners from many of the States; intelligent and progressive farmers; representatives of wholesale and retail grocery and confectionery associations; and many other organizations and interests were represented by able and earnest delegates, solely in the interest of purity of all articles of human consumption.

What was accomplisht at that congress is more fully explained by Mr. Abbott in his paper, "The Busy Bee," and copied in the American Bee Journal, March 31, page 200, and my own report publisht in the last-named paper, on page 216.

In April last I got a letter from Frank Gilmore, Watertown, Conn., enclosing a letter from a law firm of his town in which Mr. Gilmore was notified to remove his bees within 15 days under a threat of prosecution and injunction. The complaint was, that the aforesaid bees destroyed the entire crop of peaches, raspberries, and other fruits on the premises of a neighbor; that they stung horses and visitors, and otherwise annoyed the neighborhood.

I gave Mr. Gilmore such advice as I thought best suited to his case, and presume he escaped the clutches of the law, as I heard nothing further from him.

During the same month, Mr. Baldwin, of Mexico, Mo., sent me an account against a Chicago commission house, saying he could get no pay for honey billed to the firm. I at once began correspondence with the commission men, and after a couple of letters got a draft in full. Mr. Baldwin exprest himself as entirely satisfied with the transaction, and donated to the Union two years' membership in advance.

Ed Gerould, of East Smithfield, Pa., was threatened trouble from a neighbor who was determined to spray his peach orchard while in full bloom, altho it had been explained to him that by so doing his neighbor's bees might be poisoned. Mr. Gerould wrote me for advice and help. I sent him some printed matter and advised him how to proceed, which was the last I heard of that matter.

Chas. Haise, a quiet, peaceable, unoffending person who lived in Atlanta, Ill., received from the Marshal of the town the following notice in June, 1898:

"SIR:—You are hereby notified that your bees, situated and kept on the premises now occupied by you, have become and are a nuisance to the neighborhood and public, and you are hereby notified to abate, remedy, or remove the same immediately as provided by ordinance. A failure to do so will subject you to a penalty of not less than $300.00."

The Union was appealed to by Mr. Haise and his neighbor bee-keepers. The trial had already been set, and only three days remained in which to get my advice to him regarding a plan of defense. But it proved sufficient. The case was dropt when the prosecutor found an organization with money, courage, and *law* behind the defendant.

The bee-keepers interested exprest their gratitude for the prompt and efficient aid rendered by the Union, and said they believed the case was dismist because of its assistance. No money was expended by the Union in this matter.

An effort was made before the Western Classification Committee to rescind the rule instructing all railroad agents to refuse bees by freight in less than car lots. I put up the best argument I could think of by letter, but failed. The rule still stands, I believe. Mr. Aiken went before the Committee in person, by request of the President, for the same purpose.

At a meeting of the Board of Directors held in Omaha, Neb., in September, 1898, the General Manager was authorized to commence legal proceedings against the adulterators or counterfeiters of extracted honey, if, in his judgment,

such action was likely to be productive of good to bee-keepers.

Considerable correspondence has been carried on preparatory to such action, but the evidence and aid necessary to make it seem advisable has not yet developt, and no suit has yet been brought.

The Editor of the American Bee Journal called my attention to an article in a New York metropolitan journal giving credence and publicity to the old fable about comb honey being extensively manufactured without the aid of the honey-bee. The article stated that paraffine was largely used for making the comb which was filled with glucose syrup and put upon the market to deceive the public.

At the request of the Editor I sent an article to the New York paper, with a purpose to correct the error and if possible give the public some facts and opinions on the nature and use of honey.

As my reply was copied in full in the American Bee Journal, page 728, I will only say that it brought out a very satisfactory public retraction, and a personal letter from the editor asking for literature bearing on the subject of honey. I mailed her (the editor was a woman) Dr. Miller's pamphlet on the food value of honey, and I believe one other editor will be more careful in her public statements about manufactured comb honey.

If the past year has brought no signal triumph at court, the labors of the General Manager have been varied and abundant. He has been appealed to in behalf of every threatened bee-keeping interest, public and private.

Were it not for the modern blessings of phonography and typewriting machines, he could not have performed the duties of the office with any satisfaction to himself, to say nothing of pleasing those for whom he works.

Fraternally yours

EUGENE SECOR,
General Manager.

Forest City, Iowa, December, 1898.

We see by the financial statement that there is $175 in the hands of the Treasurer. There are about 450 members now belonging to the new Union, as shown by the list of members accompanying the General Manager's annual report.

The Root Co.'s Column

Readers of the American Bee Journal:

We do not propose to come at you with hammer and tongs, nor to talk you to death; but as the Root Co. has bought this column—paid cash for it—we want to

BLOW OUR OWN HORN,

Not in our own Journal, but in that of the other fellow. We are going to try to make this column interesting, and, incidentally, tell you about our wares.

Gleanings in Bee-Culture,

TWO PAPERS FOR THE PRICE OF ONE.

For $1.00 we will not only send you **Gleanings** one year, but also your choice of any of the following papers also for one year: THE AMERICAN AGRICULTURIST, weekly; THE O. JUDD FARMER, weekly; THE NEW ENGLAND HOMESTEAD, weekly; FARM JOURNAL, monthly; THE POULTRY-KEEPER, monthly. Or for $1.10 we will send **Gleanings** one year, and one of the following papers also one year: THE OHIO FARMER, weekly; THE MICHIGAN FARMER, weekly; THE PRAIRIE FARMER, weekly; and THE PRACTICAL FARMER (Mr. Terry's paper) weekly. These offers are good to either old or new subscribers, but all back subscriptions, if any, must be paid at $1.00 per year, as we believe in treating all alike.

☞ Look out for this space next time.

Send your orders to

The A. I. Root Company

MEDINA, OHIO.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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SEE THAT WINK!

Bee-Supplies. Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt service—low freight rate. Catalog free. **Walter S. Pouder,** 512 Mass. Ave., INDIANAPOLIS, INDIANA.

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THE A. I. ROOT CO'S GOODS

Wholesale. Retail.

Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.

M. H. HUNT, BELL BRANCH, MICH.

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SENT FREE

Our descriptive circular and price-list of

Bee-Hives, Italian Bees

Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. SEND FOR ONE.

Address, **F. A. SNELL,**
1A13t Milledgeville, Carroll Co., Ills.

Please mention Bee Journal when writing.

GENERAL ITEMS

Report for 1898—Red Clover.

I commenced the spring of 1898 with 35 colonies, and workt for both honey and increase. I obtained 1,200 pounds of comb honey, 350 pounds of extracted, and increast to 68 colonies, by natural swarming. Only prime swarms were hived.

Why do bee-keepers lament because their bees do not work on common red clover? Do they not know that there is nothing in it that the honey-bee wants? The mammoth red clover produces good honey, and all our honey-bees can reach the nectar, altho the corolla is far longer and deeper than in the common red clover. I never saw any honey from common red clover—only thin, red stuff. Thin as water.

I have taken the American Bee Journal for nine years—ever since beginning bee-keeping—and I would not like to do without it. THEO. REHORST.

Fond du Lac Co., Wis.

Great Honey-Eaters.

I do not want to miss a single copy of the American Bee Journal, even if you did tread most unmercifully on my pet corn last week, on page 777, in commenting on the death of Carl Maynard. You say:

"We believe we never before heard of three persons eating a pound section of honey at one sittiug. Of course it may be done, but why should any one want to fill up with so much sweetness all at once? People ought to use common-sense in eating as well as in everything else."

Now, I have not only heard of three persons eating a pound section at one sitting, but I have often seeu two persons eat that quantity. I am a bachelor, and keep bees, and when I am taking off honey it often happens that a friend drops in and takes dinner with me, and I never knew any

SPRAYING

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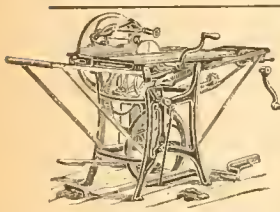
Kerosene Sprayers

is simple indeed. Kerosene emulsion made while pumping. 12 varieties sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."

THE DEMING CO., SALEM, O.

Western Agents, Hennion & Hubbell, Chicago. Catalogue and formulas free.

Please mention Bee Journal when writing.



UNION Combination SAW for ripping, cross-cutting, mitering, rabeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT and HAND POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N. Y.

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HATCH CHICKENS

BY STEAM—with the simple, perfect, self-regulating

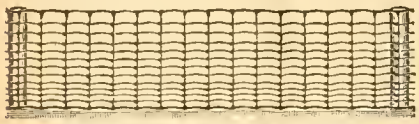
EXCELSIOR INCUBATOR

Thousands in successful operation. Lowest priced 1st-class hatcher made.

Circulars free. Send 6c. for Illus. Catalog.

GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

44A26t Please mention the Bee Journal.



ALPHONSO AND DON CARLOS

seem to be bad friends. We've heard there's a dispute over line fences. That always makes rows. Fix the **line**, we'll fix the **fence.**

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

A WASTE OF MONEY

is never desirable or justifiable. It is worse than waste to put high priced eggs in a poor, imperfect incubator.

240 EGG SIZE.

The MASCOTTE INCUBATOR

not only prevents such waste, but turns failure into success. Regulates perfectly as to heat, and ventilation. Guaranteed. Send at once for FREE catalogue.

Mascotte Incubator & Lumber Co., Box 11, Bedford, Ohio.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

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in Agricultural Pursuits can't afford to be without the

AGRICULTURAL EPITOMIST.

Sample copy Free to any address upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

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26A26t Please mention the Bee Journal.

The American Poultry Journal

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal.

INCUBATORS & BROODERS ....All about them. How to make and how to use successfully. Fully illustrated in Poultry Keeper Illustrator No. 2, 25 cts. Send for free sample copy of POULTRY KEEPER with particulars about other valuable poultry knowledge. Address, Poultry Keeper Co., box 10, Parkesburg, Pa.

Ctf Please mention the American Bee Journal.

honey left from a pound section placed on the table on such occasions; we would sometimes get on the outside of that and part of another one. I think it depends a great deal upon how well one likes honey, and what he eats besides. Our bill of fare would consist of about the following:

Bread, milk, butter, meat, fruit and honey. The meat and fruit would often remain untouchd. We ate the honey because we liked it, and why should we not? It is good, wholesome food, and nobody ever intimated that we were eating beyond the bounds of reason!

My usual ration is one pound a day, three meals; therefore, my guest must have eaten about two-thirds of a pound; yet I never thought he was a glutton. I was glad to see him enjoy it.

I agree with you, that it is not probable the honey had anything to do with the death of Mr. Maynard. On the contrary, he died in spite of the effect of the honey.

My experience, and that of every man I have talkt with on the subject is, that comb honey is a tonic in its effect. That is, if one is troubled with constipation, a diet of comb honey will give relief. I know one man on whom it acts as a purgative. Extracted honey might have the same effect.

Hurrah for the American Bee Journal! But please do not impugn the good sense of me and my neighbor because we like honey. H. D. MURRY.

Rankin Co., Miss.

[Mr. Murry, we take it all back. We thought *we* could eat a good deal of honey at one sitting, but you can beat it. What a sweet capacity—or what a capacity for sweets some people have!

Yes, we are in favor of everybody eating lots of honey—but not so much at one time as to sicken, or kill.—EDITOR.]

A Beginner's Experience.

I have read the American Bee Journal for the past year and have become very much attacht to it for the many excellent pointers that it has given me on the care of bees.

A year ago last summer a swarm alighted on a tree in my neighbor's yard. He said that he would not bother with them and if I desired I might have them. I borrowed a musty hive stored in the cellar of another neighbor, and with fear and trembling I hived my first swarm of bees. It was a late swarm, so I took no honey from them the first year. Last year was a very poor one, and I could take no honey from them again, but I have had very much pleasure studying their habits, and putting into practice some of the very excellent suggestions found in the American Bee Journal.

T. H. SONNEDECKER.

Seneca Co., Ohio, Dec. 12.

Poor Season—Deep Frames.

This has been a poor year for honey in this vicinity. The spring was all right and my bees built up as well as might be expected, considering that half of them were weak. White clover bloomed well, and altho the bees workt on it faithfully, it took too long to make a trip, so they got only enough to keep up the brood, until towards the last there came three days of an old-fashioned honey-flow, and they packt the brood-nest full, and some of them started above, but that was the end of it. Had it not been for a little white aster that grows profusely, and blooms in September, on unused lots around the edge of town, I should have had to call on the sugar barrel to feed my bees.

Well, Dr. Miller and others can harp about sticking to the standard frames, till all is blue, but I'm through with them. The way was this: I had been contemplating changing to a deep frame for several years, but the job lookt so big that I put it off until the past summer, when I finisht up the job, and I never want another like it. Now

FREIGHT PAID to any address. That's the way we send out our

CYPHERS INCUBATOR.

It combines the good qualities of all machines and has the faults of none. Our Catalogue and Guide to Poultry Culture tells all about the laws of incubation, and how to raise, feed and market poultry—all about the money end of the business. Contains plans for construction and cost of modern poultry houses and many other things worth knowing. Sent for 10 cts.

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We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

GET MORE EGGS. How? Feed the hens on **green cut bone.** They will lay double the eggs right in the middle of the winter, when eggs are worth most money.

DANDY Green Bone Cutters with or without gear are the best machines for preparing bone for fowls. **Cut fast, turn easy.** Catalogue and prices free.

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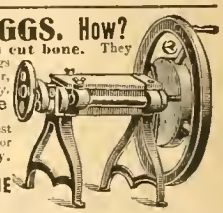

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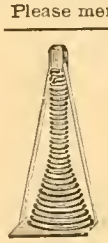


Queen-Clipping Device Free

The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

GEORGE W. YORK & CO.,

118 Michigan Street, - CHICAGO, ILL.

FIRST PRIZE WINNERS

OUR LARGE '99 POULTRY GUIDE FREE. Something entirely new; largest book out. Worth $25, to anyone; tells all about poultry; how to be a winner, how to **MAKE BIG MONEY** with eggs or stock for market or fancy. Send 15c for mailing and postage.

Box JOHN BAUSCHER, Jr. Freeport, Illinois.

Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,

and a full line of SUPPLIES.

The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

Beeswax Always Wanted

for Cash or Trade at highest price. Catalog for 1899 will be ready in January.

Send me your name, whether you are a small or large consumer or dealer.

GUS DITTMER, Augusta, Wis.

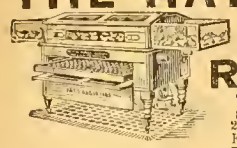
TO SELL OR LEASE FOR CASH.

An up-to-date Apiary consisting of 200 good colonies or over, with Fixtures complete. Privilege to remove to some other location if desired. Correspondence solicited. Address,

THE GILA FARM CO.

51A6t *Cliff, Grant Co., N. M.*

THE HATCHING HEN



HAS LOST HER OCCUPATION

and in the production and brooding of chicks she has been supplanted by the better and every way

RELIABLE INCUBATORS and BROODERS.

They Hatch and Brood when you are ready They don't get lousy. **They grow the strongest chicks and the most of them.** It takes a 228-page book to tell about these machines and our Mammoth Reliable Poultry Farms. Plans for poultry houses, best way to handle, feed and market fowls, etc.

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We Want Every bee-keeper to have a copy of our.....

1899 Catalog.

Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., Watertown, Wis.

Special Agent for the Southwest,

E. T. ABBOTT, St. Joseph, Missouri.

Mr. Abbott sells our Hives and Sections at Factory Prices.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each,	by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAOERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

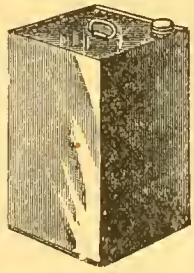
BEST

EXTRACTED HONEY FOR SALE.

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



BASSWOOD HONEY.

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Please mention the Bee Journal when writing Advertisers.

my bees are all in cypress hives, 14¼ inches inside, and the same in depth. The body is in two parts horizontally, and the extracting surplus case the same as a half body, so the frames are interchangeable for brood or surplus, and the brood-chamber can be small or large to suit circumstances. The frames are spaced by wire staples, and hung by wire nails on metal rabbets—not much chance for glue in that arrangement. Oh, I've got the management down fine—all I want next year is an old-fashioned crop.

There is nothing the matter with the American Bee Journal. I've had about all of them (bee-papers) and the American Bee Journal is the best for me.

THOS. THURLOW.

Lancaster Co., Pa., Dec. 13.

Something to Correct Fermentation.

Sometime, somewhere, I have seen, that there is something we can put in honey (extracted) that shows a tendency to ferment, or "work," as we sometimes say, and smells and tastes a little sour around the top of the jar, at the edges, a slight, white frothiness. Has any one seen or heard of any such remedy? 'Tis said it will arrest fermentation and sweeten the honey. Is this so? And what is it? I saw such a statement some time ago, but I cannot now recall when or where. I think it was some sort of an acid.

Stephenson Co., Ill. A. W. HART.

Wintering All Right.

We have cold weather here now. My bees are getting along finely. I built a shed for them four by eight feet, and am wintering seven colonies. B. F. SCHMIDT.

Clayton Co., Iowa, Dec. 15.

Small Honey Crop.

My honey crop was small the past season—about 7,000 pounds of comb and 300 pounds of extracted, from 225 colonies. I had to feed about 900 pounds of honey and sugar to keep my bees to the middle of May, as I find it better to feed in the fall than early in the spring. My bees were put into the cellar Nov. 20. We have had good sleighing and steady winter the past three weeks. C. THEILMANN.

Wabasha Co., Minn., Dec. 15.

Wintering in Double-Walled Hives.

Bees are wintering now. The weather is bright and sunshiny, with about six inches of snow, and not very cold. During the honey season I got only half a crop, as it was too dry here. My bees are on the summer stands, and will have to stay there this winter, the only protection being a double-walled hive. If they have plenty to eat, and are not disturbed, they will winter all right. I have 85 colonies.

M. J. RISTLER.

Allen Co., Ind., Dec. 15.

Doing Well with Bees.

I have 15 colonies of bees now, and have had 75 at one time. I have been in the business seven years, and am now doing well. I give them only my spare moments, as I am a contractor and builder. I get 16 and 20 cents per pound here for my honey.

LUKE W. SIMMONS.

Pope Co., Minn. Dec. 14.

Favors the Plain Section.

The white clover was plentiful in bloom the past season, but no honey, or not as good a yield as in 1897, but I got a fair crop from buckwheat. My bees are in good condition for winter, with plenty of stores, and I hope they will come out all right in the spring.

I tried the plain sections this year, and find that they are all right. I find a better sale for the honey at 10 cents a section, as

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3 Great 40-cent Offers—Each One Free!!

Below are THREE splendid Premium Offers, and we will mail your choice of any one of them for sending us $1.00 for JUST ONE NEW SUBSCRIBER for 1899.

Or, for sending us TWO NEW SUBSCRIBERS, as above, we will mail the sender all of the three great 40-cent offers.

JUST READ WHAT THEY ARE:

Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pard-

ners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES, PUG DOGS, TOBOGGANING, ETC.

Opinions of Noted Critics:

"Exceedingly amusing."—Rose E. Cleveland. "Delicious Humor."—Will Carleton. "So excruciatingly funny, we had to sit back and laugh until the tears came."—Witness. "Unquestionably her best."—Detroit Free Press. "Bitterest satire, coated with the sweetest of exhilarating fun."—Bishop Newman.

Nicely bound in paper, fully illustrated, printed from new type and on fine paper. 370 pages. Postpaid, 40 cents.

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The four "Poultry-Keeper Illustrators" are the greatest books on poultry subjects ever issued, and are a veritable poultry dictionary, covering the ground so completely that, having these four books, one needs scarcely anything more except "grit" to become a successful poultry-raiser. You cannot get such other books in the whole world, not even for $50 each, for they do not exist. Were they given in another form and elaborate binding and colored cuts you might think them easily worth $5 each, but what you want is not elegant printing, and in these we give you the value in information that you can make use of. They have cost much in labor and cash, but you get all this value for almost nothing. We mail the 4 Illustrators for 40 cents.

Illustrator No. 1.—Poultry Houses Incubators, Brooders, Coops, etc., 25 cents.

Illustrator No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc., 25 cents.

Illustrator No. 3.—Poultry Diseases, Lice, Grapes, Moulting, Egg Eating, etc., 25 cents.

Illustrator No. 4.—Judging Fowls, Description of Breeds, Mating, etc., 25 cents.

Address **GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.**

they are lighter in weight. They were not filled as well as they should be, for on an average they weighed about 12 ounces per section. I dare say the plain section will take the lead in 1899, altho this was a very poor year to test them, on account of the poor honey crop. W. H. HEIM.

Lycoming Co., Pa., Dec. 12.

Report for 1898.

I value the American Bee Journal very highly. I started in the spring of 1898 with six colonies of bees, increast to 19 and sold $32 worth of honey. If you would call that good luck, then I owe it all to the instructions I receive through the American Bee Journal. ARNOLD S. REEVES.

Cheboygan Co., Mich., Dec. 15.

Honey-Dew for Winter Stores.

The past season was practically a failure here. I got about 140 pounds of buckwheat honey. There was a great deal of honey-dew in this part of the country, and I think, generally speaking, that there was more or less of it left in the winter stores, and I will predict a great mortality among the bees in this section. I was very careful to see that there was none of it left in mine. My bees had their hives full of good buckwheat honey, and never went into winter quarters in better condition.

Venango Co., Pa., Dec. 15. ED JOLLEY.

Quite Cold Weather.

Bees apparently up to date are doing well. The weather has been quite cold, the coldest morning registering six degrees below zero. I think in this locality, and I think I may say safely in the county, the honey crop is all disposed of. We are looking forward to and making preparations for next year's harvest.

The American Bee Journal comes regularly on each Thursday evening, and a welcome guest it is. It is like an old and tried friend, and I can tie to it. Long may it live to bless and gladden the hearts of those who take it and contribute to its pages.

Clark Co., Wis., Dec. 15. L. ALLEN.

A Section Scraper, Etc.

My report for 1898 is the smallest I have had since I commenced keeping bees, six years ago; but it is not bad in comparison with my neighbor bee-keepers.

I had 40 colonies, spring count, and 1,801 full sections, making an average of 41 sections to the colony.

There has been a great deal said of late about a section-cleaner made of an old sewing machine and sandpaper or emery wheel. I have an instrument made out of a section of an old mowing machine. It is the greatest labor-saving tool there is in the business. When I take off a surplus case of honey, before I take out a wedge, while everything is tight and solid, I scrape

the tops of the sections and then the pattern-slats, and it does not take more than a minute or two; then I have nothing but the bottoms and edges of the sections to clean. For cleaning old, dirty hives it is just the thing; you can get into the corners and pretty nearly plane it out as clean as new.

I have been taking the American Bee Journal for six years and have every number bound.

Nov. 26 I put into the cellar 60 colonies in a little better condition than I ever saw them before. With the aid of "Langstroth on the Honey-Bee" and the "Old Reliable," I hope to keep improving. For a man of 68 years, I think I did remarkably well, seeing that I never had any instruction except from the bee-literature named.

DANIEL SMETHURST.

Crawford Co., Mo., Dec. 17.

Honey a Scarce Article.

My honey crop was about 200 pounds this year from 90 colonies, but my bees are in fine condition, and all in the cellar. Honey is a scarce article here. C. A. GOODELL.

Blue Earth Co., Minn., Dec. 12.

Short Honey Crop.

My honey crop was short the past season. From 50 colonies of bees I had 1,000 sections of salable honey, which brought me $70, or about 7 cents a section. It is basswood honey. White clover bloomed profusely, but secreted no nectar. D. C. WILSON.

Linn Co., Iowa, Dec. 15.

A Poor Season.

I could not keep bees without the Bee Journal. The past was a poor season here. Last spring I had 28 colonies, increast to 39, and took 700 pounds of honey, but it was all dark and not very salable. I sold five colonies and have 34 this winter. I lost one last winter out of 30.

Blair Co., Pa., Dec. 7. S. H. STOUFFER.

Results of the Past Season.

My report this year is a ton and a quarter of surplus comb honey from 40 colonies, spring count, and 48 colonies now.

McKean Co., Pa., Dec. 12. G. H. BOYD.

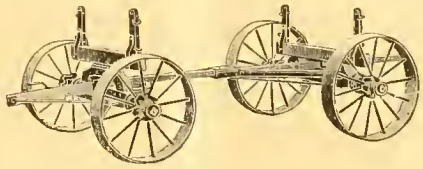
Corncobs as Smoker Fuel.

The past season was too wet for a honey crop in this part of Missouri. I secured a fair crop the last three weeks in August, and have had a good demand for comb honey at 12½ cents per pound.

Gentry Co., Mo., Dec. 15. J. E. ENYART.

BUY THE BEST.

If you want the best low-down Wagon you should buy the **Electric Handy Wagon.** It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel, which is neater, stronger and in every way better than wood. Well painted in red and varnisht. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the ELECTRIC WHEEL CO., Box 16, Quincy, Ill., for their new catalogue, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.



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They have also one of the LARGEST FACTORIES and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & CO.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

SAN FRANCISCO, Dec. 28.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

There are no changes to record in the condition of the honey market, stocks being light, as previously noted, of both comb and extracted, with market firm at current values. Business is naturally greatly restricted, and at present is almost wholly on local account. Considering the light yield this season, the aggregate of exports to date is of very liberal volume.

COLUMBUS, Dec. 29.—No improvement in demand for honey; market is quiet and barely steady at 12½@13c for fancy white, 10@11c for No. 1, and 8@9c for dark.

COLUMBUS COM. AND STORAGE CO.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 2.—The market is well supplied, especially with dark. Demand is fair for white and dark, and off grades are being neglected. We quote:

Fancy white, 12@13c; No. 1 white, 10@11c; amber, 9@10c; dark, 7@8c. Stocks of extracted of all kinds are light. White, 6½@7c; amber, 6c; dark, 5½@6c; Southern, in barrels, 60 to 65c per gallon. Beeswax dull at 26@27c.

HILDRETH BROS. & SEGELKEN.

BUFFALO, Jan. 6.—Our honey market is very quiet. Finest 1-pound white fancy combs move slow at 12c—often 11c; excellent grades, 9@10c, and dark, poor, etc., 6@8c. Extracted, 5@6c. Beeswax, fancy pure, 28@30c; dark, etc., 24@26.

BATTERSON & CO.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

Convention Notices.

Wisconsin.—The Wisconsin State Bee Keepers' Association will hold their annual convention at Madison, Feb. 9 and 10. It promises to be the best held for years. Every bee-keeper is urged to be present. An interesting program is being arranged.

Platteville, Wis. N. E. FRANCE, Sec.

Minnesota.—The following program has been arrauged by Pres. E. B. Huffman for the meeting of the Southern Minnesota Bee-Keepers' Association, which meets in Winona, Minn., Jan. 25 and 26:

Opening address—Pres. E. B. Huffman.

"How to prepare bees for winter, and the proper way to care for them"—Frank Yahnke.

"How to prepare a colony of bees for the introduction of a queen, and the best way to introduce her"—C. A. Gile.

"Which is the most profitable to work for, comb or extracted honey, and the most suitable size hive for the same?"—E. B. Cornwell.

"What is the best size of hive, frames and sections for general use?"—S. W. Judge.

"The best way to manage bees for increase"—W. F. Martin, [illegible]

"What is the best way, and the kind of hive to use, in stimulating bees, and also feeding them?"—John Turnbull.

Winona, Minn. C. A. GILE, Sec.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER 20 pages) free. Address

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Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

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Why does it sell so well?

Because it has always given better satisfaction than any other.

Because **IN 21 YEARS** there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging. No Loss.**

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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee—Revised.

The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

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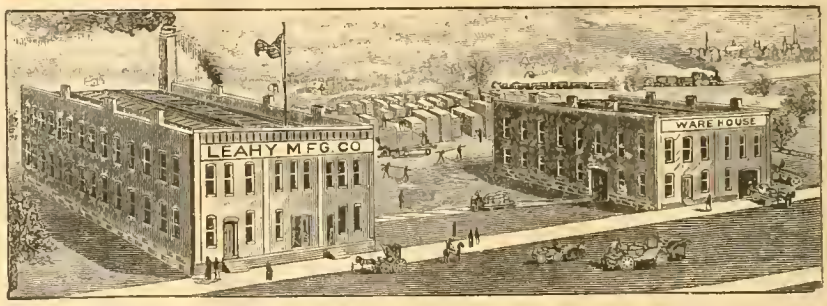

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Seven years ago we started an Apiarian Supply business in NEW YORK CITY, as we saw an opening here. That we made no mistake in this is shown by the large demand for supplies and our constantly increasing trade. Our aim was to furnish Supplies promptly. In many cases bee-keepers find the freight on Supplies from the Western factories is as much as the cost of the goods. In buying near home you not only save freight, but get your goods much more promptly. We keep several carloads of

Hives, Sections, Foundation, Etc.,

always in stock ready to ship, and the prices will be found RIGHT. We also run two apiaries for honey and sell BEES AND QUEENS. If you expect to use anything in the Apiarian line the coming year, you will do well to send for our Catalogue. We would be pleased to quote you SPECIAL PRICES on what you want, as this is our dull season, and we can afford to sell for small profits. Hives, Sections, etc., are made in Wisconsin, where lumber is low, and the best can be had.

Our Special Price on Foundation, Hives and Sections will make you Smile.

Write for it, stating the quantity you can use. DEALERS should write for our '99 discount sheet which is now ready to mail.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH** upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JANUARY 19, 1899. No. 3.

CONTRIBUTED ARTICLES

No. 2.—The "Golden" Method of Producing Comb Honey Described.

BY J. A. GOLDEN.

[Continued from page 4.]

IN order to fully understand this method, I herewith present a cut of a hive-body, one super, bottom-board and queen-cage.

First, then, if you will notice, the bottom-board has what we call a "rim" lying on it. This rim is ¾-inch thick on the outside edge, and beveled down on the inner side, and is a little wider than the edge of the side-board space and division-board. The side-body is ⅞ thick, space ⅜, and a division-board or inside board ⅜, making 1⅝ inch; the rim 1⅞ wide, the beveled edge giving a ⅜-inch space to the side passage-way. Then when preparing hives for wintering this rim is turned upside down, and when the hive is set on it, it completely shuts up the side entrance, making it a dead-air chamber from below. (I will note the temperature further on.)

To form the side entrances in a new hive, take strips ⅜-inch square, and tack one in each inside corner of the hive-body: then a ¼ inch or ⅜ board as long as the inside of the hive is tackt on the ⅜ corner strips, letting the board be flush or even with the side-body of the hive at the bottom, and even with the top of the brood-frames, or within ¼ inch of the side-body of the hive. (See engraving for side entrances and division-board, showing the bottom of brood-chamber.)

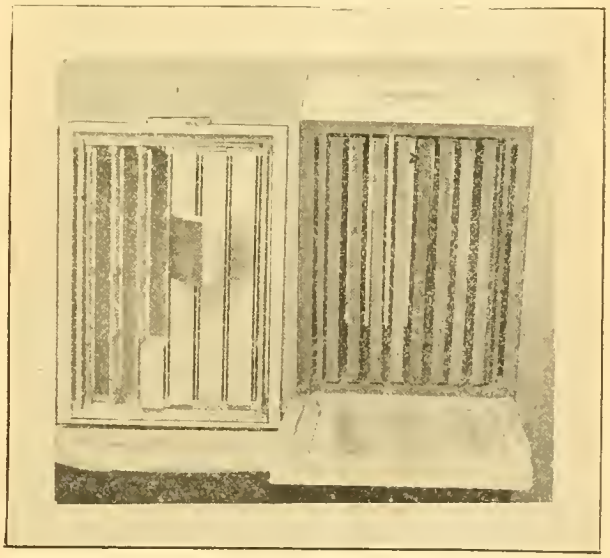
Now, reader, can you not see wisdom in this construction of a hive? Suppose there were two stairways leading up to a gallery—one was crowded with people and the other was comparatively free, and you had a load of honey to carry up, which of the two ways would you choose? Your answer would be, "The one that was not crowded, every time." And think you that the busy honey-bee is void of wisdom? Nay, verily, the honey-bee possesses largely of instinct, for the Creator has made it so.

I will now describe the super, which you will notice in the engraving. It differs from the general super in use only by cutting a ¼-inch rabbet on the top of the end-board (see engraving), and the side passage-way is made the same way as in the brood-chamber. The ⅜-inch strips are tackt in the inside corners, then tack on the same thickness of board as in the brood-chamber, letting it come even with bottom, and within ¼ inch of the top of the side-body of the super, or as high as the top of the sections. Thus when the super is placed on top of the brood-chamber, the side passage-ways come opposite each other, and thus you see the side entrance is continued from the bottom to the uppermost super; also the ¼ inch bee-space entering each super is continuous.

On the bottom of the end-boards of the super a 1/16 inch groove is cut ¼ inch wide, to receive a strip of sheet-iron 1¼ inches wide, reaching across the super and letting the ends in the super sides 1/16 inch, then tacks are driven in, thus leaving the bottom of the super level. This apron is for the section slats and separators to rest on when placed in the super. And when slats are placed in the super, a wedge strip is dropt down at each end of separators. When the sections are in, two more wedge strips are pusht down, one at each end, which tightens the sections (see illustration); also a side-wedge, if necessary.

The ¼-inch deep rabbet cut on top of the super end-board is to be as wide as the rabbet on the end-boards of the brood-chamber, which will be noticed farther. (See illustration.)

The queen-cage which you will observe extending in the super, is made ¼-inch narrower than you use, having a partly-drawn comb or foundation in it, and is covered on both sides with wire-cloth, cutting the cloth ½-inch larger all around, then folding the ½ inch over, tacking on the prepared cage with ¼-inch wire tacks, leaving one corner to spring back, to let the queen run in or out, as desired.



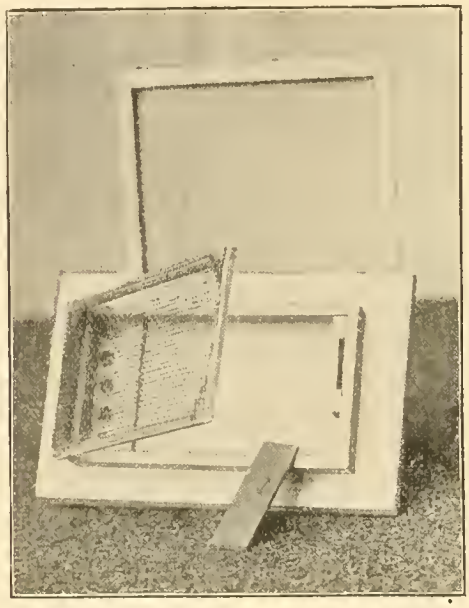
Hive-Body, Bottom-Board, Super and Queen-Cage.

I here present a view of my combined cover and feed receptacle, and I am here to say that it is one of the essentials to have in all apiaries. It is made from ¼ or ⅜ inch lumber, and fitted to the inside dimensions of the hive-body. A strip ¼ inch thick and 1½ inches wide is laid under each end of the cover, then tackt fast to the cover and tacks

clincht. Bevel the top edge of the cover all around, as this will admit the super rim to rest down and not catch on the feed cover.

A box made from ¼ or ⅜ inch lumber, 3 inches deep, 10 inches wide, and 15 inches long, is set over the center and tackt fast. From the bottom of the feed-cover a rim made from ⅜-inch lumber is made 10x15, and little strips of tin tackt across the corners on top to hold the frame in square, then cover the frame by tacking on a cover of wire-cloth, after folding the edges of cloth; then hinge the frame to the box by a strip of cloth or thin leather. On the inside of the box, close to one end, bore six or eight ⅜-inch holes, and when not in use lay over the holes a little strip of board, and at the opposite end of the box tack two little cleats, then tack on a thin strip of board, making a pocket to keep your slate or diary for recording dates of swarm, and amount of surplus of that colony.

The end strips that were clincht on the end of the feed-cover, when placed on the hive or super, rest in or over the rabbets, making a bee-space over the top of the frames and supers. Two other strips ¼-inch thick and ⅞ or one inch wide is fitted over the top of the side-entrances in the hive-body, then place the feed-cover on the brood-body, and pass a couple of screw-eyes down through the feed-cover and strips into the division-board on each side. This is used thus for wintering, making the side-entrance a complete



Combined Hive-Cover and Feed-Receptacle.

dead-air space. Those strips are taken off in the spring and laid one on each side of the feed receptacle and screwed fast to the feed-cover, ready for use when desired.

This combined cover and feed receptacle is always to remain on the hive, or on the supers when the latter are on the brood-body—always ready for its use.

A 5-inch super rim (which is shown back of the food receptacle) is placed on over the combined cover, then an outside cover. Let me note here, during the hottest weather, should there be any fears of combs, either brood or surplus, melting down, slip a little stick under the outside cover, raising it ¼ or ½ inch, and I will guarantee no combs to melt down, either in the brood or surplus I care not how hot Old Sol shines, for the passage-ways encircle the entire colony—above, beneath, and between—and he that hath an eye to see please take notice that ventilation controls the heat and hastens evaporation; and if the problem of ventilation, not drafts, is better or more perfectly solved than as set forth in the Golden hive and method, I kindly ask for its publication, for in these latter days apiculture keeps pace with all the industries of progression, and will continue so long as time is extended to mortals like bee-keepers of the present generation; and he who says apiculture has reacht its highest attainments surely is not wise.

Morgan Co., Ohio.

Emptying Unfinisht Sections—Honey of Italian Bees vs. that of Blacks.

BY EDWIN BEVINS.

WITH editorial permission I will poach on Dr. Miller's preserves to the extent of telling "New York" (see page 711, 1898) why his bees failed to clean out those unfinisht sections.

If I were in the babit of betting I would stake a pint of cider that all the unsealed honey in those sections was carried downstairs in a small fraction of the two weeks. "New York" left the sections on the hive. Then the bees were too lazy to uncap the sealed portions of the honey, and so long as it was close at hand they did not care a continental whether this sealed honey was in the brood-frames or in the supers, and they did not know anything of "New York's" intention to take it away.

When he found that this sealed honey was not going below, he should have used the uncapping-knife on it. Then his sections would have been cleaned out in short order, if the weather had been warm enough. It is best not to delay this work too long. If you do, however, you can get the sections cleaned during the sunny days of early spring. The cappings with the adhering honey can be saved in shallow boxes. If these boxes are placed in empty supers over the brood-frames, and the cappings occasionally stirred, the bees will clean them nicely, and nothing is lost.

DO ITALIANS STORE BETTER HONEY THAN BLACKS?

In answer to the question of Mr. Bartz, on page 718 (1898), I will say that I cannot tell why Italian bees store a better quality of honey than do other bees. It has been my belief and contention all along that there is no appreciable difference when all bees store from all sources alike. This would be plain to Mr. Bartz, if in printing my last article on this subject, somebody had not suppress the first half of one of my sentences, and printed the other half as if it belonged to the preceding sentence, thus rendering my meaning very obscure. Mr. Bartz would not then have askt me to account for a thing which I believe has no existence.

When it is once an understood and accepted fact that Italians store their honey from different and better sources than other bees, there will be no need of asking why this honey is of better quality than that of other bees. The answer is obvious.

It is most natural for one who has not been a close observer of the habits of the different kinds of bees for a long period of time, to suppose that all bees store from the sources within easiest reach, and that one kind of bees will get about as much honey from any one source as another kind. If observation has demonstrated the fact that Italians neglect those flowers which secrete the poorer grades of nectar, and store only from the flowers which secrete the better grades, then we know why the quality of Italian honey is *sometimes* better than that of other bees. But let all kinds of bees be confined to one source of supply—say white clover or basswood—and who is able to affirm that the honey of Italians will be any better than the honey of blacks or hybrids?

The superior quality of Italian honey (if it is superior) must be accounted for by the fact of selection (if it is a fact) when liberty of choice can be practiced. In this way only can I answer the question of Mr. Bartz.

Decatur Co., Iowa.

New Device for Closing Hive-Entrances.

BY L. KREUTZINGER.

EFFORTS to facilitate preparations of bees for transportation have led me to bring before the bee-keepers an entirely new fixture. It is a device by which the hive-entrances can be closed at a rate of 100 per hour, without disturbing the bees in the least, and without the use of a hammer or any other kind of tool whatever.

As it is solely designed for the purpose of closing up hive-entrances, we may call it an "Entrance Closer."

The accompanying illustration shows its position when attacht to the hive. The Closer consists of two parts made of perforated zinc sliding against each other by means of the framed enclosure thereof. Thus, when slid together, the "Closer" has a length of a fraction less than 12 inches, and adapted to the 8-frame hive. For 9 and 10 or larger hives, it needs only to be extended the desired length. For the old "box hive," where the entrance is but 8 inches or

less in length, only one of the two parts above mentioned will do.

But not only as to the length of the entrance this device accomplishes the purpose, but also particular attention has been paid to the height thereof. The "Entrance Closer" is arranged to cover and fit any kind of an entrance, whether narrow or high, short or long, from ¼ to ⅞ of an inch in height, and from 2 to 14½ inches in length.

It is further provided with steel plates or strips, each of the front ones having a screw, and connected by threaded rods with the rear ones, thus forming a forklike shape (crank), and serving for the firm attachment to the hive-wall.

When inserting, the strips have to be down on the bottom-board, slide the rear strips (or plates) behind the hive-wall, the perforated zinc thus remaining leaned and prest

The Kreutzinger Entrance-Closer.

against the hive; then turn the strips upright to the position as shown in the illustration, screw by hand each screw in both the strips against the zinc and hive-wall, and the entrance is closed. It is done in shorter time than it takes to read these directions.

When separating, loosen both screws, turn the strips from their upright position down to the bottom-board, and the "Closer" will slide out.

No tool of any kind is necessary, no hammering, or any waste of material, such as tacks, screen wire, etc.

Bee-keepers who practice transporting their bees from and to their out-apiaries, and those who are in the business of buying and selling bees, will find in this device a great convenience and a handy contrivance lasting them for years. It is durable, and owing to its material being of zinc it will not rust. Cook Co., Ill., Jan. 10, 1899.

Adulteration of Foods—Are We Likely to Get Laws on the Subject?

BY C. P. DADANT.

THE interest which our bee-keepers have shown at all times in this question shows that it is one of great importance to them. Indeed, if it were not for the adulteration of honey, and the fear of adulterated honey from the buyers, this article would probably be twice as valuable and of much more ready sale than it now is. Not only fraud supplies an increase in quantity, but this increast quantity is also of less quality, and thus harder to dispose of.

Then the knowledge of existing adulteration creates a prejudice which, very often, as we all know, attaches to the true product, since even the very finest article of comb honey has been often suspected by uniformed, or rather ill-informed, parties.

From time to time this question of laws on adulteration has been brought before the public, but never yet, in this country, in as persistent a way as at present.

About 1880 my father was appointed by the Western Illinois and Eastern Iowa Bee-Keepers' Association to draft and circulate a petition to Congress upon this matter. The petition was sent out and finally put before Congress with something over 10,000 bee-keepers' signatures; but it was, like many other things, buried without hope.

Now, we bee-keepers are not in the lead; the druggists, the dairymen, the consumers in general, have preceded us and joined with us to help put an end to the nuisance of adulteration. A National Congress was called last year, another has been called for this year, and the States are also awakening to the necessity of action; for an Illinois Congress was called but a few weeks ago. But little real good has been done so far, for it takes time to organize to get a footing, so as to carry a weighty influence into a legislature; but the ball has been set a-rolling, and it is hoped will not be stopt until the task is done.

It strikes me that a National enforcement of pure food laws is a necessity for success. State laws, differing in each individual State, can only be make-shifts of temporary standing and of imperfect action. Then it would be necessary to have, as in Europe, where such laws exist, inspectors, whose sole duty should be to see that the laws are enforced. There is nothing that can be objectionable in a law compelling the sale of an article under no other than its true name, and such a law ought to be enforced in every State uniformly. State sovereignty, on such questions, since the abolition of slavery, has always seemed to me to be no more than a farce, and the inhabitants of one State ought to have no more right to do wrong than those of another. What is right in Iowa cannot be wrong in Illinois, morally at least.

Some years ago Missouri had no law compelling a girl to obtain her parents' consent to her marriage before she was 18 years of age, and rash young ladies of the Sucker State were known to cross the Mississippi with their lovers, when matrimonially inclined, for the sole purpose of evading a law which did not agree with their plans. Either it was wrong for a girl to marry without her parents' consent, before she became of age, or the Illinois law was wrong.

If we have a State law on adulteration in Illinois, and they have none in a neighboring State, may not the violator of the law establish himself where he will find the greatest freedom to perpetrate his frauds?

I believe the time is close at hand when we will obtain some satisfaction on this subject. When the public spirit is ready for a reform, it takes but little time to bring it about, tho it sometimes takes a long agitation to mature the popular mind on questions involving great interests. But on this subject there is, or will be, but little open opposition. The adulterators themselves want to appear honest and fair, and the only points they will dare raise will be technical points of constitutionality or law, which ought not to stop an important reform like this.

Many reforms and many new things are on the public mind, some of which will probably not mature for decades. But some, like the hard-road question, will be pusht to a solution by private enterprise in many places, even before the country takes hold of them, thus showing plainly that they are ripe and must be carried through.

Meanwhile, let us all put a shoulder to the wheel. Propagandism is the only way to push a reform to completion. If you believe a thing is right, do not let it rest, do not cease to speak of it, to push it, to advise it until it is done.

Hancock Co., Ill.

Several Things Noted and Commented Upon.

BY WM. M. WHITNEY.

EDITOR YORK:—I have read what you say about scribblers, etc., in connection with your reference to "The Story of Bee-Farming" in the Youth's Companion, which story I read sometime ago, and, novice as I am, it was difficult to suppress a smile. While I endorse all you say on the subject referred to, yet I desire to add that crudeness is not confined entirely to the writings of novices in bee-keeping.

WHEN BASSWOOD YIELDS BEST.

As, for instance, in an article on "basswood bloom," there appears the following on page 769 (1898):

"The condition most favorable for a large yield of nectar is when the weather is very warm and the air is filled with electricity. At times when showers pass around with great display of lightning," etc.

Now, I imagine a broad smile lighting up the face of an electrician, on reading that statement. Having been taught that in a dry, cool atmosphere is the place to look for superabundance of electricity, he will be surprised to find the laws of Nature so revolutionized as to completely reverse the order of things.

SINGLE-WALL VS. DOUBLE-WALL HIVES IN WINTER.

And in another article in the same number of the Bee Journal, on the care of bees in winter, while inferentially condemning the double-wall hive, the writer gives instructions for wintering bees in single-wall hives, which, in principle, is the same thing as the double-wall excepting the front, which, being unprotected, must in very cold weather result in severely taxing the energy of the colony.

My bees are in double-walled hives, and are packt *snug and warm*, and there isn't a single day when the atmosphere is suitable for them to venture out, that they are not on the wing, whether the sun strikes the front of the hive or not; and I will go him a "Pound Sweeting"—16 ounces to the pound—that in the same locality my bees will show

their noses at the hive-entrance sooner than his will; for, if his hives are painted white, as they should be to protect his colonies from the excessive heat of summer, no winter sun will thaw out his bees through that board, but they will be obliged to depend upon their own internal warmth and the atmosphere outside, while mine are already warm, and are only waiting a favorable opportunity to fly. So much for that.

CRUDENESS IN APIARIAN LITERATURE.

An editorial in another bee-paper refers to a "pair of stairs," and in judging a honey exhibit says, "I should have believed the judge was *impartial* or unfair." Now this may be a slip of the pen, or a typographical error, but it doesn't look so. Many other things could be referred to, but I forbear.

There is plenty of literary crudeness, not chargeable to novices, but publisht over the signatures of would-be-considered experts. But what am I doing? Guess I'm not feeling very well; in fact, I'm not, for I drank a cup of coffee before retiring last night, and did not sleep well. But let us change the subject.

Being past the age of active business life, I have plenty of time to devote to my bees, and either working for or studying them, nearly my whole time is given. While I have read many works on apiculture several times carefully, and while I read all the current literature on the subject obtainable, yet there is much to be learned by actual experience.

TWIN QUEENS—COLOR IRRITATING BEES.

Some one in last week's Bee Journal reports finding twin queens, and asks if any other person can report a like instance. I had just that experience last summer. A cell was found as long as my little finger, and well formed. I watcht it with much curiosity till the time for the queen to emerge had past, when I opened it and found two queens nearly fully developt, but dead.

In my experience in the bee-yard my opinion will have to go with the minority in the "Question-Box" respecting the color of garments worn irritating bees. My habit is to go to my bees with whatever I happen to have on, and my apparel is as likely to be black as anything else; and I have not yet discovered any change in their disposition. It may be that any garment rough or woolly would cause some irritation; yet my bees are so very gentle, as a rule, that no tendency in that direction has been noticed.

At the September meeting of the Board of Trustees of the Insane Asylum, located here, after dinner it was proposed that we go out and take a look at the bees. There were several ladies in the party, many of whom, as well as gentlemen, were drest in black. We went without smoker or veil, but I suggested that if any desired protection, veils would be furnisht; they however concluded to risk being stung, so we went with no protection whatever. I lifted several hive-covers to show them section-cases and extracting-supers, then took them to a colony which had no such appliances—one which I was building up with a young queen which for certain reasons I thought much of; after uncovering the brood-chamber, I lifted frame after frame filled with brood and covered with bees; examined them from side to side, finally finding the queen, pickt her from among the bees with my fingers, showed her around among the company, and put her back, replaced the frames in the hive with not the slightest demonstration of anger from one of them; in fact, the bees seemed to admire the variety of colors worn by the different members of the party.

No, my experience is entirely against the theory, that it makes any difference what color one wears. I think the fact that most woolen goods are of a dark color, or black, has created the impression that the color causes the trouble, when in fact it is the texture of the garment, if anything.

I believe bees possess the sense of smell extremely developt, and that they recognize their master by it as completely as a dog does his. I know mine do. I can put my hands on the lighting-board, and they will run out and smell of my fingers, and go back perfectly satisfied; and the more I handle them, if it is done gently, the more familiar and quiet they become.

O! I'm a crank, all right enough. I have a *lot* of *things* to tell you, but guess I've bored you enough at this time. Kankakee Co., Ill., Dec. 12.

[Mr. Whitney did not write the foregoing for publication—only for the editor's eyes—but gracefully consented to its appearance in print, when we requested it.—EDITOR.]

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 23.]

DISCUSSION OF QUESTIONS.

QUESTION—Has any one tried the Golden method of producing comb honey, and with what success?

No one present had tried it.

HONEY STORED BY FOUL-BROODY COLONY.

QUESTION—Can we sell section honey from a super filled by a foul-broody colony?

W. L. Porter—It is very rarely that a super is filled by such a colony.

Mr. Adams—There is a fine in the foul brood law against selling such honey.

FLAVOR OF ALFALFA HONEY.

Mr. Booth—It is said that alfalfa honey has no distinctive flavor. Is this true of it any more than of other honeys? I cannot tell by tasting where honey comes from.

Pres. Aikin—Prof. Gillette once askt me to tell by tasting what a sample of honey was. I guest fruit-bloom. Then he said it was sugar-honey. He said perhaps he was not an expert at tasting, as his sense of smell was defective, and he had come to think that smell and taste went together. I have determined the source of honey by the smell of the raw nectar, and also by dissecting bees and tasting the honey-sacs. Alfalfa honey is not decided in flavor, but mild. Cleome honey has a decided flavor, and so has sweet clover honey; as Mr. Rhodes says, it tastes like cinnamon. I was told by a firm here in Denver that they could ship in a little white clover honey, mix it with a good deal of alfalfa honey, and sell it for white clover.

Mrs. Booth—I cannot tell the difference between the perfume of the blossoms of red clover and alfalfa. I have askt several to shut their eyes and try, but they could not tell. I don't think the dark and purplish honey is cleome honey, as it is said to be. I don't get any purplish honey, tho I live in the midst of miles of cleome.

H. Rauchfuss—Don't you get green-colored honey?

Mrs. Booth—No.

J. Cornelius—My crop was at least two-thirds cleome honey, and was a very dark green.

(Samples of Mr. Cornelius' honey were shown, both comb and extracted, and were of a decided green tint.)

COLOR AND TASTE OF HONEY.

Mr. Porter—I have had a good deal of experience with cleome honey. It is always of a greenish cast. This can be seen in the sections. It has a very little bitterness, not disagreeable. I have noticed a liquid oozing from the bark and leaves of the plant, leaving a residue. This has a decided flavor of cleome honey.

H. Rauchfuss—I think the presence of pollen in honey gives the color. The pollen of cleome is perfectly green. Bees working on the blossoms become green all over, and soon die. They fringe their wings by pitting them against the hard and sharp stamens in getting the nectar.

Mr. Booth—A dozen persons might bring in honey, and I would wager considerable that we could not tell the sources of it.

F. Rauchfuss—Such a sampling of honey was carried out at the Omaha meeting, and the committee made very few mistakes, only three or four.

Mr. Booth—I don't want them to see it, only taste it.

F. Rauchfuss—Out of a number of samples of the same color only one was erroneously estimated.

Mr. Honnett—Why should there not be some who cannot distinguish tastes, just as others cannot distinguish colors? Railroad committees examine for color-blindness.

Pres. Aikin—There is a vast difference in tasting-powers. You couldn't fool me on buckwheat honey if I was blindfolded.

Mr. Porter—You couldn't fool me on basswood honey. But it depends on training the observing-powers. I have

extracted some apple-blossom honey; it has a very distinct flavor, like the aroma of apple-blossoms. The best way to determine the source of honey is to extract some when unripe, then observe and cultivate the taste.

DO BEES NEED SALT IN BROOD-REARING?

QUESTION—Do bees necessarily have to have salt in brood-rearing?

Walter Martin—It is not absolutely necessary, but I think they ought to have access to salt in some form.

J. E. Lyon—I never do without salt for the bees in some form. I put from a teaspoonful to a tablespoonful of a solution of salt at the entrance. It soon dries up, but the deposit does not blow away.

Mr. Adams—Salt *is* necessary. But in this country the bees get salt from the water.

Mr. Honnett—Bees are fond of salt. Sometimes a swarm which has absconded from a hive will stay in the same hive after it has been washt with salt-water.

Mr. Rhodes—The question is, Do they *need* salt? An Eastern writer says men and cattle don't need salt. For proof, he says the cattlemen in the West don't give salt. But our cattlemen do buy and distribute salt.

H. Rauchfuss—We formerly salted our bees, and they dwindled a great deal in the spring. Lately we have not done so, and the bees have done considerably better.

Dr. McLean—Physicians say it is impossible for life to exist without salt. Bees are like other animals, therefore they require salt. They will procure more or less in what they eat. Salt exists in almost every food.

COLONIES SLIGHTLY AFFECTED WITH FOUL BROOD.

QUESTION—What would you do with a colony having just a little foul brood at this time of year, the hive being very strong with bees and honey?

Mr. Adams—Let them alone until spring.

H. Rauchfuss—When can you handle bees in spring without risk? Kill them. You can buy bees for $2.00 a colony. Boil the honey, and buy bees with the proceeds.

Mr. Booth—It is against the law to get the money for that honey.

H. Rauchfuss—The law only says until disinfected.

Mr. Martin—Can the honey be taken from such hives so as to be first-class, or salable at all?

Pres. Aikin—The flavor is destroyed by the heat.

David Bates—I have had considerable experience with foul brood. If I had such a colony as is described, I would set it aside and burn the whole thing. If you leave it, you are liable never to get rid of the disease. A neighbor who has been treating it has had it continuously four or five years.. He has kept the whole country alive with it. The only safe way to handle foul brood at this time of year is to burn the whole thing.

Mr. Lyon—There is too much monkeying with foul brood in my neighborhood. It doesn't pay. I would kill it out. Five out of ten colonies will be robbed out before spring, regardless of the present strength of the colonies.

Mr. Bates—I have been in the bee-business over 45 years. I have had it come up in my yard again and again. I have tried to save the colonies infected, but have only made a bad matter worse. They get weak and are robbed, and spread the disease over the yard and the neighborhood. If 100 sections were on a hive, I would not save any of it.

Mrs. Booth—My honey won't burn.

F. Rauchfuss—Make a pit, set the hive over it, and after everything has burned that will burn, bury the rest.

BEES TAXABLE AS PROPERTY.

QUESTION—What authority have you for thinking that bees are taxable as other property?

A lengthy discussion followed, which it seems best to summarize. Some thought that as bees could not be identified they could not be taxt, and exprest surprise that any one should want his bees taxt, even if they were property, as no object was apparent in having them taxt; and pointed out that frequently bees were not taxt by assessors. To these objections it was replied that the reasons bees are often not taxt are either that they are often considered insignificant, or that freedom from taxation is considered an inducement to bee-culture; that runaway bees can be claimed if not lost sight of, and could be recovered if identified, just as horses are; that in general it is not a question of identifying, for bees are generally in hives, not out of them, and hives may always be identified; that if bees were not property, inspectors could not inspect, nor bee-keepers' proceedings be publisht at the expense of the State, nor would money be invested in bees, instead of in something more secure; and that if bees were not property, they could not be protected by law.

SECOND DAY.

The following paper was read by Mr. Ben Honnett:

Improved Apicultural Appliances.

There is an urgent necessity for an article upon this subject, to elicit the discussion necessary to a formal conclusion. There is a wide divergence of opinion with reference to appliances, *so-called improved*. Starting with the Langstroth improved hive are several objections; that is, the brood-frame resting in wood saw-kerf, which causes many of them to become broken and troublesome at the busiest time. Another is the raised rabbet all around the brood-chamber, which frequently breaks off on being pried loose from the super. The Wisconsin is an improvement in this respect, as it allows the super to be slid on without injury to the bees, which in itself is a great consideration where time is essential.

We next find many other hives patterned in a great measure after Langstroth's, to-wit: the Wisconsin, the Wisconsin-Improved, the Heddon shallow or Heddon deep, all having their supporters. In my humble judgment a movable-frame hive is correct, no matter what the make.

So again we have the preference shown in size, some advocating 8-frame and others 10-frame hives. From my own experience I prefer 8-frame hives, for this reason: They are more easily handled, the super is more quickly filled and more readily refilled when a good honey-flow is on. There being more medium-sized swarms than extra-large ones, is another good reason for 8-frame hives. Of course I do not for a moment believe this is the only hive that is good. I would say that the particular hive that a bee-keeper fancies is more apt to give him good results than any other, from the very fact of his being predisposed in its favor (providing always the frames are movable), the main consideration being the result in honey.

Beginners are more apt to be misled about hives than the old bee-keeper. It is a notable fact that almost every novice in bee-keeping makes an attempt to revolutionize the business, which, according to his or her idea, has been conducted on erroneous principles, hence we have the large variety of hives. I have bought bees at various times, and accumulated Langstroth, Langstroth-Grimm, Simplicity, Langstroth-Improved, Wisconsin, Heddon, and others; my preference being the Wisconsin, which I have found to be simple to operate and producing good results. I know it is touching a ticklish spot for me to mention this fact, and it will arouse considerable discussion (and that is what we want with reference to the best hive), so I will leave the subject and proceed.

The various makes of supers also have many divers admirers. I have tried the T, the pattern-slat, and some of my own make, the latter having bars across the super instead of the T, the same allowing only bee-space to enter the super. They workt fairly well, but I prefer the pattern-slat to any other, for this reason: the sections fit the slat to a nicety, and this super keeps the sections cleaner than any other, which is very desirable, as those having plenty of propolis to remove will readily appreciate. Of course the follower can be wedged up to a nicety, thereby giving the bees a minimum of space to gum up.

I have been using separators for two seasons, and tho I have not met with the success that was desirable, I am satisfied that those running their apiaries for comb honey should not do without them. My hives being mostly the Wisconsin, I use the thin wood separator scallopt at the bottom, as I found many that had not been scallopt gnawed at the bottom, thereby evidently wasting time which should be otherwise employed.

I carefully examined a new device called the fence separator, which is intended for sections especially prepared, without bee-spaces. I object to the fence separators for the following reasons: They are not practicable, nor are they profitable to use. A change must be made in every super, giving more width to allow for the separator, which has cleats up and down holding the fence, which are glued, and in this dry climate fall off. The space between the fence is too small, and will cause the bees to enlarge the same, but at the cost of valuable time.

It is claimed by the manufacturer that the square no-bee-space sections produce more uniform and sightly combs than others. That remains to be proven. I feel firmly that they are a delusion and a snare in our line. I believe in

keeping up with the times, but make your experiments on a small scale, so you may avoid disaster. Of course, we understand the animus—in most cases the manufacturers find it necessary to get out some novelty, the same as trec-men, charging round prices and getting rid of them as rapidly as possible.

A most careful consideration should be given to any new appliance, in recognizing as a factor the increase in cost and time necessary to handle the same; and most bee-keepers have other business, and give their time, which is rusht in the spring, and is limited. If we could concentrate upon one style of hive and section, the bee-keeper would have solved a problem that has as yet found no solution.

BEN HONNETT.

F. Rauchfuss—I have never been favorably imprest with the plain section and fence. But I would not condemn them until they have been tried. At the Omaha Exposition, I thought the best filled and capt honey, so far as could be judged from the outside of the cases, was a lot of three cases of Minnesota honey, in plain sections. It is another question whether there are advantages enough in these fixtures to justify adopting them.

Prof. Gillette—When plain sections and ordinary sections are stackt up separately, the plain sections take the eye better.

Mr. Adams—Don't we have to cater to the eye more than to the palate?

Prof. Gillette—Yes.

A. L. Foster—I am starting in the bee-business in Colorado, and I want to start right, not change after starting.

F. L. Thompson—Last season I had one-half of five supers full of plain sections with fences, and the other half of ordinary sections with plain separators. The plain sections did not prove superior to the others in the matter of filling at the edges of the combs, except in one super, and then it was but faintly apparent. On counting the number of holes through the combs next to the wood, I found that the plain sections averaged 2½ holes to the section, while the ordinary sections averaged 3½ holes. But this superiority of the plain sections was about all on paper, because I did not suspect it from the appearance alone, and only found it out by counting and computing. Of course, the combs were plump in comparison to the width of the section. I found they did not need separators in the shipping-case, as had been supposed they would. As I did not use special cases, but the ordinary ones, together with a follower and wedge, I cannot speak of the difficulty of withdrawing them from the case.

Prof. Gillette—I also found a small difference in favor of the plain sections, in the matter of holes in the combs. I have not the figures, but my recollection is, the percentage was identical with that mentioned by the last speaker.

S. M. Carlzen—Why does Mr. Honnett recommend the 8-frame hive to beginners? My hives had 15 frames of brood in them.

Mr. Honnett—I have 8-frame hives because I am troubled with the rheumatism.

Mr. Foster—I have a number of 8-frame hives, which I will use, tiering up if necessary. My brother, Oliver Foster, who runs for extracted honey, has 10-frame hives, which he tiers up sometimes five high, with brood in all of them.

H. Rauchfuss—Would you advise giving the queen access to the extracting-supers? I would not advise extracting from combs containing brood. There will be some thin honey, because thin honey is placed next the brood. I would confine the queen to one story, and use 10-frame hives.

F. Rauchfuss—The prevalence of 8-frame hives in Colorado is not due to the choice of the bee-keepers, but to that of the manufacturers. The 8-frame hive is easy to manage. Those who started manufacturing here advocated the 8-frame hive. Being bee-keepers also, their judgment was largely followed. Then Root's catalog advises beginners to use the 8-frame hive. There are many who would be glad to use the 10-frame, but they still continue buying the 8-frame because they wish to avoid a change. If the matter was left to bee-keepers, there would be an equal or greater number of larger hives used. One can produce just as much honey with the 8-frame hive, but it takes more labor, and therefore costs more.

[Continued next week.]

The Premiums offered on page 30 are well worth working for. Look at them.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Granulation of Extracted Honey.

A correspondent informs me that I am in error in saying that all honey in the North will granulate when cold weather comes, if it is pure extracted. He says that in Gage Co., Neb., it is the exception and not the rule when extracted honey granulates before March. The honey is heart's-ease, of good flavor, not weighing more than 12 pounds per gallon.

I am glad to make this correction, and wish others would make it known if there are other localities in the North where extracted honey remains liquid. It is something new to me.

C. C. MILLER.

Moving Bees Long Distances.

1. How many miles can bees be moved on a spring wagon? I expect to move about 200 miles or more in the spring. Is it best to move them by freight or express?

2. Is there air enough for the bees through the hive-entrance in moving?

MINNESOTA.

ANSWERS.—1. There is no limit to the distance bees can be hauled on a wagon, providing you stop each day early enough for them to have a little flight before dark, closing them up after all have gone in. They could be placed on a rack with the entrances facing outward, so they would not need to be taken off the wagon. It might be better to ship on the cars, especially if wagon-roads are rough, but the matter of cost must be considered.

2. That depends on the size of entrance and the weather. If cool weather, an ordinary entrance will be enough. If the temperature is up to 70 degrees or more, it would be better to have an entrance the full width of the hive and 1½ to 2 inches deep; or, still better, wire-cloth covering the whole of the hive.

Worms Stripping Basswood Trees.

The basswood and other trees of this locality for the past two years have been stript of their leaves and blossoms by a worm resembling the apple-tree worm. We have had no honey from basswood in the past two years. Can you tell me if this worm has come to stay? If so, will it kill the trees?

NEW YORK.

ANSWER.—I cannot speak with any degree of authority, but give it as my opinion that the worm you speak of—if it is the same one I've seen in this locality—will not be a sufficiently continuous stayer to do any permanent damage to the trees. But I may be entirely wrong.

The Dadant Bottom Frame-Spacer.

I wish to thank A. P. Raymond for his article on frame-spacing, on page 738 (1898.) He mentioned a bottom-spacer described in Langstroth Revised, but does not describe it, and says some object to it because it is old. I would like it fully explained.

OHIO.

ANSWER.—The bottom frame-spacer in Langstroth Revised has no description given, only a picture of it. You can make it somewhat after this fashion: Drive into a board a row of nails as far apart as the distance you want your frames spaced from center to center, that is, the nails will be 1⅜ from each other if you desire to space your frames 1⅜ inches from center to center. These nails are not to be driven in tight, but left projecting enough to hold the wire. A second row of nails is driven parallel to the first row, the two rows being something like two inches apart. In this second row, however, there are twice as many nails as in the first row, and they are arranged differently. Opposite the space between two nails in the first row are two nails about as far apart as the width of your bottom-bar. They are just far enough apart so that when the wire is bent

around them the bottom-bar will fit nicely into the bent wire. Now start to bend your wire by bending it around the first nail in the first row, then around not one nail but around the pair of nails in the second row, then around another nail in the first row, then around another pair in the second row, and so on. That makes your spacing-wire complete, but you can't get it off the board. You may draw the nails, or you may burn up the board. Neither way is as good as the plan of Mr. Dadant. Instead of having the rows of nails in the same board, he has them in two boards, the two boards being held apart by a piece at each end perhaps ¾-inch in thickness. When the wire is properly bent, these pieces at the ends are drawn out, and the wire is easily removed. It is only fair to say that many bee-keepers nowadays prefer that the spacing shall all be independent of the hive and only connected with the frame. Mr. Raymond likes the plan of spacing he has described, and says: "I believe this method has several advantages over the staple or nail methods of spacing." Others think just the reverse. I had years ago hives with practically the same spacing he describes, and very much prefer spacing with nails or staples as I have described on page 791 (1891.) But every one has a right to his own preference.

Sections with and Without Separators—Questions on the Honey Crop.

1. Do you prefer using sections 1⅞ wide, with separators? Or could you do about as well by using sections 7-to-the-foot without separators?

2. Did you ever harvest a good crop of honey from white clover the season following a dry freeze-up? Or did you ever know of any one that did, where irrigation was used?

3. Did you ever fail to secure a crop from white clover the season following a wet freeze-up? That is, the ground wet two feet or so before it froze? IOWA.

ANSWERS.—1. I can't do as well with either without as with separators. Some report that they can get along very well without separators, having very few sections that will not pack well in a shipping-case. It is likely that localities and seasons may make a difference. If honey comes in a flood from the time bees commence in a super till the sections are sealed, and if the colony is strong, separators are not so necessary. But if you think 1⅞ are all right when separators are used, you should not think of using sections as wide as 7-to-the-foot; 1⅝ without separators will give you combs of the same thickness as 1⅞ with separators. If I thought of doing without separators, I'm not sure but I would use 1½-inch sections.

2 and 3. I've never kept track close enough to be able to answer. I'll be glad to yield the floor to any one who will answer. The questions are very suggestive.

Cutting Out Drone-Comb—Cleansing Flight—Sowing Alfalfa.

My apiary consists of 104 colonies, in double-walled Quinby hives.

1. How early in the spring should drone-comb be cut out of frames?

2. (a) In the spring should weak colonies be given frames of honey and brood from the strong ones? (b) If so, how early may it be done?

3. My bees came out yesterday (Dec. 29), as it was warm, and they covered the windows with spots which I had to wash off, and found it a rather hard job. Have my bees the dysentery?

4. My father has about a quarter of an acre of land in which he said I could plant Alfalfa next spring if I wanted to try it. Would you advise me to do so?

SOUTHERN ILLINOIS.

ANSWERS.—1. In time of fruit-bloom, or any time earlier on a day warm enough for bees to fly freely. But remember that if you cut out drone-comb and leave the bees to fill up the vacancy at their own sweet wills, they will be likely to fill up with drone-comb. The safe way is to fill up the holes with pieces of worker-comb. If you have say six frames containing more or less drone-comb, cut up one or two of them to provide worker-comb patches for the rest.

2. (a) It may do to take frames of honey from those that can spare them, and give to those that are needy, but as a rule you lose more than you gain to take brood from the strong and give to the weak, unless you wait till some are very strong. (b) The honey may be taken at any time when the weather is warm enough for bees to fly freely, but no brood should be taken till the hive is pretty well filled with brood.

3. Probably not. It was only a cleansing flight.

4. I don't believe it will pay you, so far as the bees are concerned. I have known of some successful fields of Alfalfa raised in Illinois, but have never yet heard of bees getting nectar from them. Sweet clover would be more to the point.

Michigan Laws on Bee-Keeping—The Union.

1. What are the rules or laws for keeping bees inside the corporation of city, town or village in Michigan? How many feet or rods from the public highway or adjoining property?

2. How does the United States Bee-Keepers' Union help new bee-keepers?

3. Does it assist him in selling honey? or is it like a good many other unions, only for the name of belonging to the union, and a help to those who have already got a market establisht for their product? MICHIGAN.

ANSWERS.—1. That's hardly a question for this department. You can find out a good deal easier than I can what are the laws of the corporation in which you live. Remember there are many thousands of cities, towns and villages, and it would take a lifetime to learn about all of them.

2. One way in which great good has been done is in defending those who have been persecuted by petty, unjust laws trying to drive them out of village or city corporations. In fact, it is much like an insurance company in that respect. But you can't get insurance on a house after it is burned down. Neither can you get help from the Bee-Keepers' Union unless you are a member *before* you get in sight of trouble. Of course, that's not the only good that comes from the Union. Among other things it has in view putting down adulteration, which will help all bee-keepers greatly.

3. I don't know of anything that will help the sale of honey more than putting down adulteration. I don't think many of us would pay in dollars merely for the name.

Getting Sections Entirely Filled.

I use the 4¼x4¼ sections with separators, and the bees do not fill the sections full, but leave holes at all four corners. How can I get the bees to fill them out?

ALABAMA.

ANSWER.—If you can find a way to have all sections filled out plump at the corners and get it patented, you have a small fortune in sight. Having colonies very strong will help toward it. Crowding the bees for room rather than allowing an excess of room is also favorable. It is claimed that the fence separators do not leave the corners of the sections as open as the plain separators.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

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United States Bee-Keepers' Union.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

A Big Cuban Honey-Crop is that of Dr. Vieta, as reported in Gleanings by W. W. Somerford. It was 360,000 pounds from two apiaries. That's all!

Apis Dorsata is strongly championed by the American Bee-Keeper. Since those who oppose it say that it cannot prosper in this land, why need there be any feeling about its introduction?

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Kind of Bee-Keepers Who Succeed.—Mr. L. B. Smith, in the Southland Queen, tells in one paragraph how to succeed in bee-keeping. Here is the method:

"You must read, study, and even dream about bees if you expect to make a good bee-keeper. You might succeed after a fashion without the bee papers and books, but failure is sure to come sooner or later. I cannot call to mind one man or woman that was in the bee-business 10 years ago that did not take and read the bee papers and books that to-day has any bees, let alone make any money out of it; while those that have taken and read books and journals have almost all had fair success, and some making good money at it."

Condition of Bee-Keeping in Cuba. Mr. W. W. Somerford, has just returned from Cuba, where he took "a sort of inventory trip, to ascertain what was left, after the war, of some of the finest apiaries in the world, and also to embark in the bee-business again in Cuba after an absence of four years from that island." Here is what he reported in Gleanings:

"I visited many apiaries that were in a run-down condition. By way of caution I will suggest to those in a hurry to embark in the honey-business in Cuba, that there's plenty of time; the island is not such a paradise just now—not even for the modern honey-producer.

"And to those bee-keepers in the United States who fear that the American market is going to be ruined by cheap, dark grades of honey from Cuba, I will say that Amsterdam, Holland, and foreign cities in general, get the honey that's produced in Cuba—not the American markets. The American honey-producers in Cuba, who have tried the United States markets, have paid for their experience in shipping, commission, lighterage, freight, cooperage, drayage (import duty 10 cents per gallon), and commission, to say nothing of leakage; and by the time these charges are figured up, and the cost of package added, at the Cuban cost, 5 cents per gallon, the shipper wonders why he didn't sell in Havana at 40 or 50 cents per gallon net (packages paid for by the honey-buyer).

"After traveling hundreds of miles over the country I came to the conclusion that next October or November will be soon enough for the would-be Cuban bee-keepers to embark for Cuba."

The Dot Diagram Contest.—Last week we announced that this week we would give the result of the dot contest which ended Jan. 1. It will be remembered that we made four cash offers, and 60 Globe bee-veils, which retail at $1.00 each. The cash offers were, 1st, $50; 2nd, $25; 3rd, $10; and 4th, $5. This makes a total of $150.

There were 2083 dots in the diagram, and 84 persons who found that number are as follows:

Those Winning the $50 Offer.

F. McBride	B. W. Peck	L. A. Syverud	O. Taylor
John Peters	John K. Kimble	Frank J. Clark	Rev. W. Kauf
G. A. McDonald	John Scherer	A. H. Dean	John F. Logsdon
S. S. Sampson	A. E. Coonrod	Kelsey Hart	E. E. Allen
F. Mitterneyer	John Stroebel, Jr	Wm. F. Ware	Wm. Irwin
P. D. Wine	S. G. Jackson	G. C. Britton	A. P. Bender
Geo. W. Gross	L. M. Adams	K. Heuring	A. M. Fisk
R. P. Sweet	John Michaels	Milo B. Brand	Lewis Sampson
P. F. Schrauff	W. H. Pridgen	Oliver Adcock	Omer M. Smith
M. Walrath	L. L. Skaggs	Chas. Putman	T. Pierrepont, Jr
D. J. Troyer	Joe Amman	John F. Beatty	L. L. Moore
R. Hurlburt	W. L. Hunker	G. W. Powell	W. H. Price
N. S. Cushing, Jr	W. H. Wetherbee	R. A. McPheron	Geo. J. Ward
Arnold S. Reeves	R. H. Abbott	H. E. McGregor	E. V. Trnesdell
D. A. Holeman	F. Greiner	V. N. Allen	R. Lowey
John D. Gray	H. F. Schultz	R. Rodenberger	Otto A. Miller
Geo. Crowden	M. D. Andes	Roderick Cameron	G. S. Crego
Luke Nordhoff	N. Richardson	C. A. Haines	Wm. Schopke
J. W. Shirley	E. D. Lerch	M. B. Cooper	B. K. Lawlin
Mrs. L. Mack	James W. Brown	Geo. A. Cobb	A. F. Fluckiger
R. B. Wheeler	F. W. Brown	B. C. Bigelow	L. J. Whitney

The next nearest counts were 2082 and 2084, and there were 125 who came under those numbers:

Those Winning the $25 Offer.

E. W. Lanier	Edmund Worthen	D. F. Berry	H. H. Lampert
Paul F. Bratz	H. M. Rood	John Motl	J. P. Blunk
Fred G. Berner	G. A. C. Clarke	M. S. Snow	Geo. W. Riker
Alonzo Knights	H. J. Dayhoff	Neil Galbraith	Julius Herman
G. L. Good	G. W. Lawson	F. W. Haynes	Geo. E. Nichols
E. August Weiss	B. Volkering	W. E. Heintzelman	J. J. Frantz
S. M. Cox	John G. Krasser	E. Manicke	W. S. Benton
N. H. Vogt	Stephen Lawson	H. S. Norcross	F. Sauter
John Morton	D. Cooley	F. C. Wiggins	Miletus Sims
Fred Reitman	H. L. Gloege	Wm. Witkaisky	Chas. Paul
Mrs. M. A. Golden	F. M. Peterson	O. M. Pierson	A. T. Smith
John P. Anderson	Geo Hallman	Edw. Scoggin	Frank E. Ryerse
A. J. Fisher	Orville Jones	H. D. Hill	S. S. Butts
W. E. Virgin	Thos. S. Wallace	Louis Thill	Percival Golden
J. W. Lane	Philip Roth	Thos. C. Stewart	Wm. Stewart
John L. Walther	A. C. Abbott	T. W. McGinley	H. S. Jones
W. Bishop	A. I. Cook	John T. Young	J. C. Hendricks
H. L. Meyer	H. Sonnedecker	Chris Hedler	Geo. F. Fall
John K. Frisbee	S. Burton	T. J. Green	O. D. French
D. A. Goodman	Jesse Willis	Frank Snyder	C. H. Eastman
C. E. Snyder	John J. Yonke	L. P. Billings	C. C. Parsons
Frank Fishell	Allen Lewton	B. M. Snyder	H. Nootnagle
S. H. Hurst	D. L. Carlton	E. A. Lindquist	John V. Emmert
J. M. Urban	E. G. Money	Stoughton Cooley	M. S. Patterson
W. T. Sherman	J. E. Henry	S. Rudesill	Geo. H. Weaver
G. J. Doane	Carlos Wheeler	G. F. Haider	Will Prindle
L. Hansen & Sons	Wesley Kencig	L. P. Spring	F. H. Krauss
J. D. Moffett	A. H. Kanagy	E. Davison	George Weis
A. Pontious	B. Hummert	J. J. Burke	G. E. Quimby
Jos. J. Giger	L. K. Smith	Chas. W. Ingalls	
Wm. Wilson	Chas. B. Alden	John Kramer	
Wm. Daubenspeck	J. Cornelius	J. B. Pyle	

Next would be 2081 and 2085, and the following 103 reported these numbers:

Those Winning the $10 Offer.

Albert E. Isaac	S. H. Stouffer	Jno. D. Brown	C. F. Kautman
V. W. McNeil	Alfred E. Smith	W. N. Harter	G. W. Wilcox
George C. Hall	A. Waddington	D. H. Croy	Aug. Weiss
J. O. Kvambeck	Hollis Pullen	H. Lampman	Wm. J. Healey
A. N. Draper	J. B. Dann	M. McKimmie	H. E. Mundorf
B. A. Smith	A. Shaw	J. A. Duncan	L. Stuchelbausen
Wm. Helphrey	Lillian E. Trester	Wm. Munch	C. W. Brenner
J. H. Tait	B. C. Miller	J. W. Klein	E. H. Bridenstine
F. A. Crowell	Jas. Woodworth	Thos. Shotbolt	A. Ziegler
James McNeill	R. J. Purcell	H. Trout	Fred Behrens
C. J. Sittler	Henry Willson	John Hopkins	F. H. Walker
Chalon Fowls	J. A. Tidmore	John Hileman	S. M. Bragdon
Wm. Russell	A. F. Smith	Andrew Vorum	J. F. Merrill
W. I. Copeland	C. Lindblom	Jno. M. Hunzeker	C. H. Carpenter
Geo. M. Sowarby	Alex. Rose	Chas. C. Current	Geo. D. Hecox
Rev. Chas. Horack	J. P. Pinkin	F. Schach	N. Staininger
W. H. Cook	B. A. Armor	W. Muth	H. Gibson
L. C. Pierce	W. E. Owen	Ernest W. Doe	L. B. Boardman
A. C. Faulkner	A. Snideman	J. A. Munroe	Frank Loekhart
N. Roghair	John A. Pease	T. G. Bratten	Wm. Richart
Jos. Fortier	E. C. Murphree	Geo. J. Stray	G. F. Sutherland
W. E. Turbox	G. W. Morrow	Aaron S. Johnson	Wm. Rohrig
John Kidney	L. C. George	Fred Welty	Jos. Stephenson
F. Tambourine	S. M. Burns	John Rogers	Geo. L. Whitehead
F. J. R. Davenport	L. G. Purvis	John C. Ward	J. L. Terrell
C. V. Mann	F. W. Unger	S. C. Kocourek	

The last of the cash winners are these 94, who reported 2080 and 2086 as the number of dots:

Those Winning the $5.00 Offer.

L. Morningstar	Henry B. Pratt	M. A. Foster	S. A. Dickson
Thos. Dougherty	A. B. Cross	Geo. M. Buck	B. Weber
Jos. Kunles	C. H. Benson	Wm. Renne	O. R. Coe
Willie Peterson	Emile Belle	Jno. W. Lyell	Geo. E. Dudley
F. A. Chandler	Jos. Unterbrink	S. D. McClain	Frank Coverdale
E. Woodall	F. M. Curtice	R. F. Jones	M. M. Stouffer
E. W. Brown	Geo. W. Ebling	Mrs. I. D. Harrison	Wm. N. Sessions
Paul Stahmer	G. W. Olds	Frank L. Goss	Mrs. John Moore
Levi Moss	Harry Brokaw	F. W. Goodell	Chas. A. Gile
N. B. Franklin	E. G. Sieber	M. F. Hathaway	H. Wilken
F. Mothersead.	Josiah Gately	W. B McGraw	Jas. A. Stone
Alpha Wallace	L. G. Clark	J. E. Morgan, sr.	E. Woodmansee
W. M. Barnes	A. R. Cowan	Jas. Quinn	Geo. A. Benner
J. B. Ausmus	G. L. Heim	N. Staple	H. W. Savage
Fred D. Gibbons	Wm. H. Daniel	Geo. Bischoff	N. P. Parsons
Payne Bros.	Miss G. T. Love	W. D. Furry	Robt. Kutzner
C. B. Howard	O. B. Montfort	J. J. Angus	Jac. Verret
Edward Tanner	Wm. Goedker	Jos. Ouradnik	Edw. Craig
Wm. Webb	Wm. G. Corey	C. G. Burgess	E. L. Hayes
W. H. Dougherty	G. Schermerhorn	A. A. Lepper	H. C. Day
Hubert Fuehsen	H. W. Roop	W. H. Bristol	W. S. Stansell
Artie B. Fritz	D. Pullen	Jos. Nondorf	C. V. Tomlinson
J. A. Funk	Wm Price	H. C. Roberts	
W. H. Coe	Max Zahner	Daniel Wyss	

The 60 who are entitled to bee-veils are the following, with either 2079 or 2087 dots, the veils having been mailed:

Those Winning the Bee-Veil Offer.

Geo. Randall	Marcus N. Ames	I. N. Jacoby	Geo. Wetter, jr
Theo. Rehorst	H. F. Tresselen	E. Webb	W. S. Feeback
J. H. Stock	H. M. Arnd	Edwin Crowell	D. P. Ott
Malcolm Fairchild	D. P. Stevenson	J. L. Ballow	W. L. Kemp
A. Wurfel	W. T. Collins	F. W. Galway	W. F. Justin
Henry Witherell	James Shearer	A. Rozell	G. W. Petrie
H. R. Ryan	A. Hedler	W. A. J. Simpson	Jos. H. Cox
Mrs. D. E. Graves	E. Nuckols	Peter Galle	H. Braun
Fred Robey	Chas. King	Mrs. Mary Haas	C. S. Cochran
Mrs. F. C. Bundy	W. H. Tuttle	B. H. Tripp	H. S. Pollock
N. Paulsen	M. A. Bradford	J. B. Sullivan	F. Grosser
Ernest Reid	E. M. Slocum	Willis Thompson	G. K. Hubbard
John F. Sautter	B. W. Hall	W. T. Suter	A. J. Howe
Chas. Karnatz	H. Matthews	Stanley Hunck	H. W. Best
H. R. Robertson	Elsie Markley	A. C. Tilden	C. O. Cornelius

As to the cash offers, we are ready to mail them at once, but have decided to suggest the following, which we thought of only last week:

All know that a Langstroth Monument Fund is being raised. Now every bee-keeper in the land will want to help on that fund. Why not those who are entitled to cash awards, just drop us a postal card instructing us to send to Mr. Secor what is due them, and let it apply on the Langstroth Monument Fund?

Those getting the $50, are entitled to 60 cents each; the $25 ones, 20 cents each; the $10 ones, 10 cents each; the $5 ones, 5 cents each.

There are 406 of the cash winners, which would cost us $8.12 just for postage to mail them their amounts. Now we will add that two cents to each one's amount who will drop us a card telling us to send it to Mr. Secor for the Langstroth Monument Fund. You see, if all of the 406 would decide to do this, we would just mail Mr. Secor a check for $98.12, which would be a handsome addition to the fund, and go far toward getting a fitting monument.

How about it, friends? Do you want us to do that? If so, please drop us a card at once. If not, we will mail what is due in February. Or, if you wish us to make any other disposition of the amount due you, please tell us promptly.

MR. D. D. DANIHER, a bee-keeper of Dane Co., Wis., was written up lately in the Wisconsin State Journal, at Madison. Mr. D. has 55 colonies of bees. He is the oldest bee-keeper in his part of the country. In 1879 he imported 12 Italian queens, for which he paid $68.42.

* * * * *

THE DES MOINES INCUBATOR CO., of Des Moines, Iowa, has sent us their 5th annual catalog, showing their "Successful" henless hatchers. It takes 148 pages to tell about them, and they mail their catalog for only 6 cents. Better send for a copy, and tell them you saw their advertisement in the American Bee Journal.

* * * * *

THE KREUTZINGER ENTRANCE-CLOSER (page 35) we have examined, and, upon testing it on our hives, we find in it the merits which are mentioned. We understand that arrangements are being made to offer them for sale. The retail price will likely be 20 cents each. Any one desiring a sample, can send that amount for it to the office of the American Bee Journal.

* * * * *

THE RELIABLE INCUBATOR & BROODER CO., of Quincy, Ill., are a great concern. Not because they advertise in the American Bee Journal, but because of their success in making reliable goods for poultry-keepers. Their 1899 catalog, with its 228 pages, is mailed for 10 cents to any one interested. Send for it, and also mention having seen their name in this journal.

* * * * *

MR. G. M. DOOLITTLE, writing us Jan. 12, when sending an article for publication, said:

"Hardly able to do anything. This is the first article this year, action of heart is weakened, and extremities are like sticks. 'Tis almost painful to be using hands and feet that don't seem like mine."

But we are glad Mr. Doolittle is "on the mend," even if it is slow and painful. We hope soon to hear that he is all right again.

* * * * *

DR. C. C. MILLER, after taking time to "make up his mind," wrote us Jan. 11:

"The Bee Journal for the new year with its face washt, hair combed, and clean clothes, is a beauty. Those little vignettes between the articles in the first department are very neat. The more I look at the new type, the better I like it."

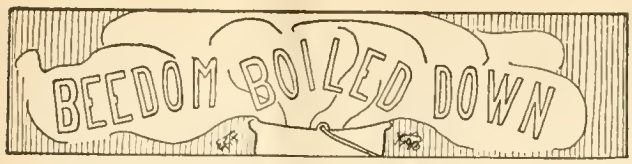
Thank you, Doctor. We thought you would be pleased with the "shining up" of the old American Bee Journal. We have long wanted to put a new "dress" on our paper, but couldn't well see our way clear to do it before. The old "dress" was worn just eight years, having been "fitted on" by Mr. Newman. Surely, a new one was well deserved.

* * * * *

CAPT. J. E. HETHERINGTON perhaps the largest honey-producer in all New York State—wrote us Jan. 6:

"I have great faith in the United States Bee-Keepers' Union if its present officers will stand by it with the good sense and energy they certainly possess."

Capt. Hetherington, who is one of the "old-timers" in bee-keeping, knew intimately the lamented Moses Quinby, who did so much to place practical bee-keeping upon a higher plane. We had the great pleasure of meeting the Captain at the Buffalo convention, in 1897, and there formed an exalted estimate of him and his work in apiculture. He delivered a most eloquent address at that meeting of the Union, going back over the many years of his apiarian experience, and paying high tribute to the labors and memory of Moses Quinby. We regretted exceedingly that no shorthand reporter was present to "take down" the Captain's interesting address, so that it might be preserved with the rest of the proceedings of that memorable Buffalo convention.



Properly-Reared Queens Give Best Results.—G. M. Doolittle says his queens now require a larger brood-nest than they did before he began rearing them according to the plans given in his book on "Scientific Queen-Rearing."—Gleanings.

His Honey Sells Itself.—S. F. Trego has been selling 15 pounds of nice heart's-ease extracted honey for a dollar, and now he does not need to seek for customers, with granulated sugar 16 pounds for a dollar—the honey just sells itself.—Gleanings.

Sealed Brood as Bait.—In order to induce the bees to commence promptly in the extracting-super, J. W. Rouse puts in the super a frame or two of brood, and he says the queen is less likely to go up if the brood is all sealed.—Progressive Bee-Keeper.

A Use for Propolis is given in Revue Internationale as a substitute for gum-lac in the manufacture of fire-works. Gleanings thinks no one would want to take the job of gathering 100 pounds of it at $5.00 a pound. Perhaps propolis is not as plenty at Medina as at some other places.

Horse-Hair Veils, or those having the face part of that material, says F. L. Thompson, in Gleanings, are about equal to cotton tulle veils for seeing through, with the advantage that they never gather in folds. He has one in which the horse-hair part is still good after two seasons' use.

Cost of Large Hives.—C. P. Dadant, in comparing large with small hives, gave the cost of the large ones as about double as much as that of the small ones. In a later number of Gleanings he reconsiders the question, and gets figures from the A. I. Root Co., to the effect that the cost is only 40 to 50 percent more.

Clipping Queens seems to be quite popular in Canada. At the Ontario Convention nearly all seemed to be "clippers." Editor Holtermann met the objection that clipt queens are more promptly superseded by saying that unclipt queens are superseded without its being known. When a clipt queen is superseded, it can easily be known.—Canadian Bee Journal.

To Preserve Combs Against Bee-Moths.—A. Delcour puts them in a close place and then puts in a piece of rag saturated with essence of aspic. He prefers this to sulfur, as it avoids the danger of fire, and also because the sulfur does not affect the eggs, while the aspic either affects the eggs or else remains to affect the young larvæ when they hatch out.—L'Abeille.

To Liquefy Honey.—An item from Gleanings advising to set glass packages of granulated honey in the oven of a cook-stove is being copied by other journals, but without adding the direction given in Gleanings to set the glass vessels in shipping-cases. A glass tumbler may be set on a shingle in the oven all right, but if set directly on the hot metal it will come to grief.

Value of Queens.—In opposition to the views of Editor Hutchinson, who says queens are the least expensive part of a colony (making that an argument in favor of small colonies), C. P. Dadant, in Gleanings, is emphatic in the assertion that in the spring the queens are the part of most especial value. In the spring there is a lack of queens and an overplus of empty hives and combs.

Egg-Laying Depends on Kind of Honey.—Doolittle having made the statement that nine Gallup frames would entertain the best queens to their fullest capacity as to egg-laying, and Dr. Gallup having said that a queen of his occupied fully 24 frames, Dr. Miller askt Doolittle in Gleanings how he reconciled the two statements. Doolittle replies that he was talking about colonies used for comb honey, while Gallup was talking about extracted. He says: "There is something about extracted honey that causes bees to *feed* a queen in such a way that she will give double the eggs, if she has comb-room, that she will when no extracting is done." He says he gets no more brood in his 10-frame Langstroth hives than he does in his 9-frame Gallup hives (equivalent to 6¾ Langstroth frames.)

Drouth and Honey Crops Go Together in Texas.—The editor of the Southland Queen having reported that for lack of rain he was feeding his bees, G. F. Davidson says he thinks no one else is doing any feeding, and in an experience of 13 years he has had his best crops of honey when it was extremely dry, altho getting good crops when rain was plenty. No rain fell from Aug. 20, 1886, to May 9, 1887, and 1887 was the best honey-year he ever knew.

Burying Bees for Winter.—Jungclaus publishes, in Leipzinger-Bztg., his experience therein. Nov. 14 he put his bees in a hole dug seven feet deep, lined with boards, covered with boards on timbers, then put roofing-paper over this, then 16 inches of earth, and over the whole a covering of roofing-paper weighted down with stones to prevent blowing away. After four months the bees came out in fine condition, the average consumption having been 3½ pounds.

The Wedding-Flight of the Queen, says R. Wiesner, in Deutsche Imker, is supposed to take place as a rule only once, and at the most only five or six times, but he determined that in favorable weather, with plenty of drones, a queen takes at least 10 such flights, at about 11 o'clock, each flight lasting only a few seconds, and at the longest only 10 minutes. In 1895 a queen that returned to the hive with signs of mating took three flights on the following day, and did not begin to lay till the 8th day after the last flight.

Large Hives are advocated in Southland Queen by L. Stachelhausen. He says he has found by actual test that they are more profitable. Especially in seasons with not very good honey-flow, these strong colonies are sometimes the only ones that yield any surplus. Even if two weak colonies should store as much as one strong one, it takes more time and labor throughout the year to take care of the two weak ones. The two weak colonies will consume for their own use a good deal more honey in the course of the year than a single colony equal to their combined force.

Prevention of Swarming.—Last season Mr. Doolittle caged his queens in the out-apiary when the yield was on and there were signs of swarming. Ten days later the queen was removed and a young laying queen was put in the same cage, the cage being left in the same position in the hive. Enough candy was in the cage so the bees liberated the queen in about two days. This prevented all swarming, and left the colony with a vigorous queen for next spring's breeding. Of course all queen-cells were cut at the time the young queen was given.—Progressive Bee-Keeper.

Getting Wax Out of Combs is done by Wm. McNally after this manner: "Our wash-house boiler is of 25 gallons capacity, and into this I put 10 gallons of rainwater and three tablespoonfuls of vitriol; I then procure a clean, old, strong bag, like a very open sugar-bag; the combs are prest hard into it to a size that will go inside the boiler; it is then firmly tied, and immerst in the boiler of water. As the combs melt the wax oozes out and is ladled off the top and poured into clean, cold water. The vitriol and the pouring into cold water improves the color. A second melting of the wax is necessary to put it into marketable shape.—Bee-Keepers' Record.

Death from Stings.—Geo. L. Vinal gives in Gleanings a detailed account of the case of a horse that received many stings on head, nose, ears, neck and body. The normal pulse of a horse is 36 to 40 in a minute; respiration, 10 to 12: temperature, 98 3-5. In 45 minutes the pulse was 60, respiration 30, temperature 102. Urine highly brown color, with frequent watery evacuation of the bowels. 15 minutes later pulse was 80, respiration 60, temperature 104, the horse throwing himself down, jumping up, plunging and tugging at his rope, and whinnying in a loud, shrill voice. 75 minutes later the symptoms began to abate, the breathing becoming heavy, the extremities showing paralysis, and four hours after being stung he was no longer able to get up, and seven hours after being stung he died.

Root's Column

We are not quite ready yet to tell you about our new goods and some of the improvements we have made in certain lines; but when we are, we propose to tell you something that will interest you beyond a doubt; so

KEEP YOUR EYES ON THIS COLUMN

While our engravers are busy finishing certain cuts, we desire to call your attention to

Gleanings in Bee-Culture.

If you haven't seen late numbers, send for sample copies. Among other things you will discover that it is

An Illustrated Bee Journal.

If you are a busy man, and haven't time or inclination to *read* much, you may pick up in Gleanings an idea that will be worth dollars by once glancing at a cut.

During the coming year we propose to describe several different manipulations pertaining to bee-keeping, by a series of line cuts that will show you just how it is done.

Another Big Offer.

In addition to our other offers in last week's Bee Journal we propose to make one more.

Queen-Bee Free...

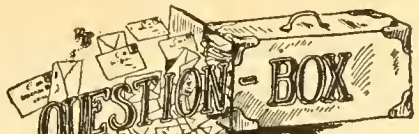
To every one, either an old or new subscriber, sending us $1.00 for Gleanings for one year, we will send, some time in July or August next, one **UNTESTED ITALIAN QUEEN.**

CONDITIONS:

Old subscribers may take advantage of this offer, PROVIDING that all back dues on subscription, if any, be paid at the rate of $1.00 per year in addition to $1.00 in ADVANCE for Gleanings and the queen. We reserve the right to send queens in July or August in the order that these subscriptions are received. First come, first served. Again, as we are giving these queens away free we cannot guarantee replacing in case one dies in the mails. We will use our best mailing-cage, and take every precaution, but cannot do more. So far as possible queens will be reared in our own yards by the Doolittle method; but if the demand for these queens is too great we reserve the right to order from reliable breeders to help out. First orders received will probably take queens of our own rearing.

Remember that the $1.00 secures a year's subscription to Gleanings and an Untested Italian Queen, providing that all arrears, if any, are paid. Send all orders to

The A. I. Root Company
MEDINA, OHIO.



In the multitude of counsellors there is safety.—Prov. 11-14.

How to Win Success in the Honey-Selling Business.

Query 88.—I am a young man desiring to build up a demand for both comb and extracted honey, with the view of following honey-selling as a business. Briefly, what would you advise that would tend to success in the line indicated?—City.

E. France—Honesty and push.

Rev. M. Mahin—The question is too big for this department.

W. G. Larrabee—Always have a first-class unadulterated article.

Prof. A. J. Cook—Energy and honesty. They will win, SURE.

C. H. Dibbern—Get out and *hustle*, and don't be afraid of any one.

G. M. Doolittle—That you supply your customers with only the *best*.

O. O. Poppleton—I have had too little experience in this line to offer advice.

J. A. Green—Sell only good honey, at a price that will pay you for your labor.

Jas. A. Stone—Deliver true to sample; give honest weights, and live up to contract.

P. H. Elwood—I haven't had much retail experience. Produce a good article, and distribute honey-leaflets.

J. M. Hambaugh—Handle the *pure stuff*, put up in attractive and durable shapes, and *advertise*, and *work*.

Dr. J. P. H. Brown—Read the articles on marketing honey in late numbers of the American Bee Journal.

Mrs. L. Harrison—Representing goods just as they are. Buy or sell no faced goods; do an honest business.

Chas. Dadant & Son—Take samples and sell from these in all sizes of packages. A quick mind and a glib tongue are useful.

Eugene Secor—I advise the same methods that make success in any other line of business—integrity, energy, perseverance.

Emerson T. Abbott—Attend strictly to business; do not talk politics or religion; handle only first-class goods; deal fairly; and stick to it.

E. S. Lovesy—Honesty is the best policy. Try to carry the best goods, and give the producer and consumer a square deal, and your success will be assured.

A. F. Brown—Get started, and keep at it, advertising your business, never tiring of setting forth the merits of honey as an article of food. Briefly, PUSH is the word.

R. L. Taylor—Learn to know the quality of honey, how to handle and take care of it, and the tastes of your customers. Deal fairly, be active and indomitably persistent.

S. T. Pettit—Be candid, punctual, prompt and obliging, but not subservient. Keep your place of business very clean. Handle nothing but pure

Mention this paper.

EVERGREENS
100, 6 to 8 in. $1; 12 to 18 in. $2.50, 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 25 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.
D. HILL, Evergreen Specialist, **Dundee, Ill.**
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LADIES, if you have superfluous
HAIR ON THE FACE
send for new information how to remove it easily and effectually without chemicals or instruments. Correspondence confidential in plain sealed envelope.
Mrs. M. N. PERRY. Box 93. Oak Park, Ills.
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with our new patent
KEROSENE SPRAYERS
is simple indeed. Kerosene Emulsion made while pumping. 12 varieties Sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."
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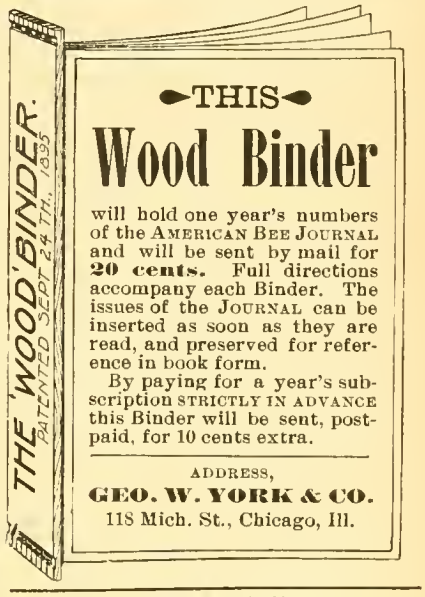

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will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.
By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.
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with fence and plain sections, and a full line of other
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BY STEAM—with the simple, perfect, self-regulating
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Thousands in successful operation. Lowest priced 1st-class hatcher made.
Circulars free. Send 6c. for Illus. Catal.
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Is one of the leading departments in the **Modern Farmer and Busy Bee,** the best general **FARM** and **BEE** paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want. Address,
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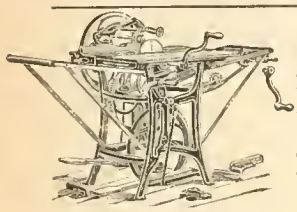

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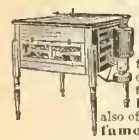

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THE CYPHERS INCUBATOR CO. Box 50 WAYLAND, N.Y

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Our descriptive circular and price-list of

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Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. SEND FOR ONE.

Address, F. A. SNELL,

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SEE THAT WINK!

Bee-Supplies. Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt service—low freight rate. Catalog free. Walter S. Pouder,

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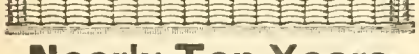

Nearly Ten Years

Iowa farmers have used Page fence. On the 30th ult. we shipped a solid train load—thirty-five full cars—to these same farmers.

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WE TRUST THE PUBLIC

and send them our Incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fail with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on Incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.

Von Culin Incubator Co. 5 Adams St. Delaware City, Del.

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goods. Display your goods in a way to make them attractive. Manifest a cheerful willingness to wait upon people, but don't urge them to buy, and they will buy again.

D. W. Heise—Read up, and put into practice the able articles written by H. F. Moore in the American Bee Journal, on "A B C of Marketing Honey." I know of nothing better.

R. C. Aikin—Honesty, fairness, firmness, frankness, push, advertising, "always and everlastingly at it." Have good goods, and have them all the time, and get the people to using them.

J. E. Pond—Learn to keep bees and care for them. Offer your honey honestly to the public, giving just what is wanted. Never offer an inferior article for a good one, and generally follow the Golden Rule.

Dr. C. C. Miller—Utter and entire honesty; familiarity with the markets and with the methods of producing honey. Read all the articles that have been written in this and perhaps other journals on the subject.

G. W. Demaree—In my opinion, to be or to become a successful honey merchant, one must be an apiarist. He should know how to produce honey. And he should do business in a way to gain the confidence of all with whom he has dealing. *Straight* is the word.

Dr. A. B. Mason—Read the articles by Messrs. G. K. Hubbard and Herman F. Moore that have appeared in the American Bee Journal during the past year, and make use of the information so obtained; and don't overlook what Mr. Moore says about section-cleaners on page 595 (1898).

GENERAL ITEMS

Bees in Fair Winter Condition.

Bees did well last spring. I increast from 11 colonies to 32, by natural swarming, and obtained 400 pounds of comb honey. The latter part of the season was not very good, but bees are in fair condition for winter; one-half packt on the summer stands, and the rest in the cellar. I could not think of doing without the American Bee Journal.

GEO. SCHERMERHORN.

St. Lawrence Co., N. Y., Dec. 20.

Honey-Dew and Fall Honey.

My apiary consists of 30 colonies in Langstroth hives, mostly Italians. I have taken about 900 pounds of comb honey, about half honey-dew, the balance fall honey. I had a swarm of Italians Sept. 27; after filling 21 two-pound sections they left me.

I am well pleased with the American Bee Journal, and can't do without it.

P. MCDOWELL.

Mason Co., Ky., Dec. 20.

A Comb Honey Bee-Keeper.

Bees are wintering nicely up to date. They had a flight Dec. 18. I have 257 colonies in three different yards, packt in chaff hives. Last season I secured 5,000 pounds of comb honey from 198 colonies, and increast to 253. In my 20 years' experience with bees, last season was the poorest except one. In that time I have produced and sold 37½ tons of comb honey. The last

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.

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Something entirely new; the largest out; worth $25. to anyone. Tells all you may want to know about poultry. How to build poultry houses and MAKE BIG MONEY with poultry. Send 15c. for postage and mailing. JOHN BAUSCHER, Jr. Box 94 Freeport, Ill.

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An up-to-date Apiary consisting of 200 good colonies or over, with Fixtures complete. Privilege to remove to some other location if desired. Correspondence solicited. Address,

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Hives, Sections,

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The best of everything. Write for Catalog, with prices, and samples of Foundation and Sections.

Beeswax Always Wanted

for Cash or Trade at highest price. Catalog for 1899 will be ready in January.

Send me your name, whether you are a small or large consumer or dealer.

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The Monette Queen-Clipping device is a fine thing for use in catching and clipping queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device.

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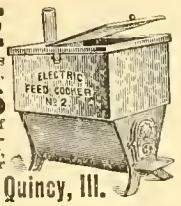
DOUBLE THE FOOD VALUE

can be secured from grain fed to live stock if it is cooked. It is more easily digested and assimilated by the animal stomach.

ELECTRIC FEED COOKERS



These cook feed in the quickest and best way and with the least amount of fuel. Made of cast iron, lined with steel. Boilers made of heavy galvanized steel, made in 12 sizes. Capacity from 25 to 100 gals. Strong, well made and will last indefinitely. Order before the cold weather catches you. Write at once for free circulars and prices.

Electric Wheel Co., Box 16 Quincy, Ill.

We Want Every bee-keeper to have a copy of our.....

1899 Catalog.

Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS CO., Watertown, Wis.

Special Agent for the Southwest,

E. T. ABBOTT, St. Joseph, Missouri.

Mr. Abbott sells our Hives and Sections at Factory Prices.

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PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

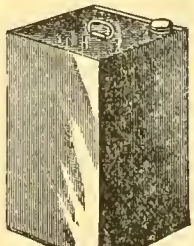
BEST

EXTRACTED HONEY FOR SALE.

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



BASSWOOD HONEY.

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7½ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

SAVE MONEY AND FEED BY BUYING AND USING OUR **Reliable Stock Food Cookers** **$5.00 FARMER'S FEED COOKERS**

It is low priced, not cheap. Made from the best of cast gray iron with 14 oz. galvanized steel boiler to hold 20 gals. Just the thing for cooking feed for stock, pigs or poultry and heat water for scalding hogs. are equally good but of much larger capacity. 25 to 100 gals. We will be glad to quote prices on inquiry. Do not buy until you get our free descriptive circulars. Better write for them at once.

RELIABLE INCUBATOR AND BROODER CO.
Box B2, Quincy, Illinois.

eight years I have sold it in Chicago. In my 20 years' experience in shipping honey to commission men in more than 12 different cities, I never had the pleasure of meeting an honest commission man till I met him in Chicago. Up to eight years I had the same opinion of commission men that the immortal Horace Greeley had of the Democrats. "He did not think all thieves were Democrats, but he thought all Democrats were thieves." C. D. DOANE.

Genesee Co., Mich., Dec. 22.

[We fear that "Horace" was pretty severe on the Democrats. We know some that are nice men. But *we* care more for *the man* than for any *party name*.—EDITOR.]

He Likes Bee-Keeping.

The Bee Journal has been a great help to me. My bees did well last summer. I like bee-keeping as long as I can have the Bee Journal as an adviser. FRED ROBY.

Hall Co., Neb., Dec. 17.

Wintering in a Cave.

The American Bee Journal has been a great help to me the past summer. I had bees on shares and could not have gotten along nearly so well without it. I got my dollar's worth (the price of a yearly subscription) out of several single numbers at several different times. I will not be without it as long as I keep bees and can raise the subscription price.

I put 94 colonies into the cave last fall, and they are all right so far.

T. J. BROOKS

Pine Co., Minn., Dec. 17.

Bees Did Fairly Well.

I began in the spring of 1898 with five colonies, and increast to nine, but I had one swarm issue Aug. 16, and another Aug. 22. In October I put the two together and gave them 15 pounds of honey in addition to what they had. My bees did fairly well the past season, and if I can succeed in getting them through the winter all right I shall be glad. J. W. HAWKINS.

Buncombe Co., N. C., Dec. 16.

A Beginner's Report.

I commenced the spring of 1898 with three fair colonies, and had nine good swarms, but I was unfortunate in losing one queen, so I doubled its colony with another. It workt all right, so now I have 11 colonies in the cellar, with a fine lot of honey in each hive.

We had a lot of fun catching swarms, and my wife thought not so much in watching for them to issue. It was not a very good season for honey, but what we got in the supers was No. 1—the best I ever saw. Next year I hope for a better season and more honey.

I like the American Bee Journal; it is a great help to me, and I will continue to take it as long as it helps me so much.

M. N. AMES.

Vernon Co., Wis., Dec. 19.

An Old Bee-Keeper's Report.

I am nearing 81 years of age. I put my bees out last spring, and when they were ready to go to work there were about 75 or 80 colonies, which increast to about 100, and I got about 30 pounds of surplus honey, not all marketable. They had stored for winter from 30 pounds down to starvation. I thought I would try to winter the greater part, so I bought a big barrel of sugar and fed them. I got ready to put a part of them into the cellar, and a part packt on the summer stands. I got up on a Monday morning, and the ground was covered with sleet and snow. The next morning, Nov. 22, the awful snowstorm came, and there the bees are under the snow, and there they are likely to stay while they live.

HIGH-GRADE INCUBATORS

WE CAN SUIT YOU IN PRICE AND WE GUARANTEE TO PLEASE YOU IN QUALITY. What more could we do? Our catalogue tells all, and is devoted largely to practical matters pertaining to poultry raising. Has 148 pages; mailed to any address for 6c. No wild and woolly statements, toy outfits, nor prize package lots to offer. Fair treatment, prompt service and full value are what we try to give our customers.

DES MOINES INCUBATOR CO. Box 78, Des Moines, Iowa.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Listen! Take my Advice and buy Your Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf **AUGUST WEISS, Hortonville, Wis.**

MAMMOTH OFFER.

For only 25 cents—I will mail you on receipt of this amount **Four Valuable Money-Making Secrets.** ELECTRIC POWDERS—one of the most salable articles of the day and as staple as flour; something that every house-keeper will buy. It is useful for gold and silver, brass, copper, tin, steel, or any material where a brilliant lustre is required.

Farmers' Paint—Farmers will find this profitable for house, fence, or bee-hives.

Grafting-Wax—The best kind that is made; it has no equal.

Washing Powder—the Laundress' Assistant. Warranted not to injure the finest fabric. No acid, no potash. In the washroom it saves time, labor, expense, muscle, temper, and hands. The clothes will come out clean and white without wear or tear, or rubbing on washboards; therefore will last twice as long. It also requires to be tested to be appreciated. If it does not give satisfaction I will refund the money. All these—total value $2.00—all for 25 cents, stamps or silver. Address quick, JOHN GASSON, Brock, Darke Co., Ohio. 3A1t

TWO WAGONS AT ONE PRICE.

It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, cornfodder, wood, stones, etc. The man who already has a wagon may have one of these low handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 16, Quincy, Illinois, for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

Please mention Bee Journal when writing.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

That seems to be the only way I can get rid of them.

One thing I would like to say for encouragement of bee-keepers, and that is, if I am not a false prophet, 1899 will be a good honey year, for this reason: In 1897, about the middle of July, vegetation dried up, the clovers killed out, bees quit breeding; the bees that went into winter quarters were old field-bees. There was so much spring dwindling, and they were so late in getting to work; while in 1898 they kept breeding quite late, and the hives were full of young bees. More: The clovers are seeded thick, and we are having a good winter for it to keep.

Can't do without the Bee Journal, if my bees live. A. F. CROSBY.

Franklin Co., Iowa, Dec. 21.

A Good Report.

I began the spring with 26 colonies, increast to 32, and ran 24 for honey. My total crop was 2,350 pounds. Six colonies were used for experimental purposes. My bees are all Adel, and I can assure you I have a strain for business. I crost one with 3-banded Italians, and another with the golden strain. I would not exchange my hives for all other hives. I have a hive that has wintered bees for six years, without loss, on the summer stands.

C. VAN BLARICUM.

Calhoun Co., Mich., Dec. 19.

Fears Overstocking.

There are a good many bees in this vicinity, and I am a little afraid it is overstockt. I think there are nine men owning bees within the city limits, and about four of these on quite a large scale. Then there are several within one or two miles of town. I am the only one that winters bees on the summer stands, but so far I have been very successful with this method.

Grant Co., Wis., Dec. 19. A. SHAW.

Wintered Without Any Bee-Bread.

I have 100 colonies of bees in the cellar, all in good condition. I got 3,000 pounds of comb honey the past year, mostly light. I have made some experiments with bees the past season; also wintered two colonies without any bee-bread at all, last winter.

I could not do without the American Bee Journal for twice what it costs.

ROBT. H. NORTMAN.

Jackson Co., Wis., Dec. 18.

A Short Honey Crop.

I like the old American Bee Journal very much, and do not want to miss any of the copies as long as I keep bees. My bees are in good condition for winter, tho our honey crop was short this year—I got only about 2,500 pounds, which I sold at home, and could sell as much more if I had it. I had only 65 colonies to start with in the spring, and increast to 140. I hope next year will be a good one. W. W. WILLIAMS.

Goliad Co., Tex., Dec. 18.

Last Year a Hard One.

I am an old bee-keeper, having kept bees ever since I was old enough, except the four years during the war, 1861 to 1865. I have only 36 colonies at present. This year was a deadener in this locality.

S. POLAND.

Richland Co., Ohio, Dec. 21.

Will Use 10-Frame Hives.

Last spring I got the bee-fever and then I commenced to read up on bees, and I got two colonies, one in an old soap-box, which I transferred, combs and all, into a St. Joe hive. It stored about 30 pounds of honey. I also transferred one for my neighbor which stored for him 25 pounds. Both did well, and went into winter quarters in good condition. I think I did well, not

having had any experience before, except what I learned from the book "Bees and Honey."

My other colony stored for me 75 pounds, and I now have four colonies in good condition.

I am using the St. Joe hive, 8 and 10 frame. I will use the 10-frame hive hereafter, as I think it is the best. I can have a larger colony in a hive that costs but a few cents more. Generally the larger the colony the more honey, and the less trouble.

N. H. VOGT.

Nemaha Co., Kan., Dec. 19.

Predicts Winter Loss of Bees.

Bees did very poorly the past season. From 38 colonies, spring count, I had only one swarm, and somewhere between 500 and 600 pounds of comb honey. I believe there will not be many bees in this locality by next spring. They have mostly honey-dew stores for winter. Prospects are good for next season.

The American Bee Journal is what every bee-keeper needs. HARVEY BROKAW.

Richland Co., Ohio, Dec. 16.

Poor Season in 1898.

The past season was a poor one for honey in this county, but we hope for better things in the future. I must have the American Bee Journal as long as I handle bees. W. H. TUTTLE.

Union Co., Iowa, Dec. 21.

Poor Season for Honey.

The past was a very poor season for honey. I have 19 colonies in the cellar in fair condition. I have plenty of honey for the home table, but none to spare as surplus. W. H. KIZER.

Jasper Co., Iowa, Nov. 22.

Cheap Bees and Honey.

Comb honey is selling at 10 cents a pound here. Bees are in good condition, but bee-keepers seem rather discouraged. Any one can buy all the bees he wants now for $2.50 a colony. Two years ago they were $5.00. N. RICHARDSON.

Steele Co., Minn., Dec. 19.

Wintering Well.

Bees are wintering well so far. It is raining to-day. W. M. DANIELS.

Wood Co., Ohio, Dec. 19.

Results of the Past Season,

My bees went into winter quarters in good condition. I have 31 colonies—4 in the cellar, and the balance outside in chaff hives. I had about 800 pounds of surplus honey this year from 31 colonies. Last year I had 2,000 pounds from 13 colonies.

Lucas Co., Ohio, Dec. 18. M. BEST.

A Young Bee-Keeper.

Two years ago my father bought 4 colonies of bees, and the next year they increast to 9, and this year to 14. Now he has given them to me for full management. I am 16 years old, and take the greatest interest in bee-culture. I have read all the works on bees I could get hold of, and find nothing in the way of general information as good as I can find in the American Bee Journal. WILLIE T. STEPHENSON.

Massac Co., Ill., Dec. 19.

Report for 1898.

Our summer flow from white clover was short on account of dry weather; about 30 pounds per colony, spring count, half comb and half extracted. My apiary is located on the beautiful Upper Iowa river, just over the State line on the Minnesota side. The bee-business has not been a success in this section the past season, as the continuous dry weather absolutely dried up everything just as the linden was in the bloom, and I am sure that a great many bee-keepers in this section will find before next June that their number of colonies will be greatly cut down, as brood-rearing stopt two months earlier than it should have been allowed to do if feeding had to be resorted to. Of course, all practical bee-keepers feed enough to keep up brood-rearing sufficient to make sure of plenty of young bees for the winter, and those that did not will see it after it is too late.

F. A. CROWELL.

Fillmore Co., Minn., Dec. 20.

Very Short Honey-Flow.

I keep about 25 colonies almost for my own use. This year we had a very short honey-flow—only about 15 days. I had between 1,300 and 1,400 pounds of honey, mostly extracted. From one colony I got 162 pounds this year; last year I took 158 from the same hive. I think my bees did fairly well considering the short honey-flow. I have all Italian bees. I have tried to get the best I can find the past four or five years. I like the clear, bright 5-banded the best. I have some pretty nice bees. I have one queen I bought last spring for an extra-good one, and paid $2.00 for her, and I would not give 25 cents for another unless I could not help it. I clipt all of my queens last spring, for I could not spend the time to watch them through the swarming season. When I thought the colony was nearly ready to swarm I caged the queen and then would go through in eight or nine days and cut the queen-cells out, and let the queen go. Sometimes I would take the queen away and let them rear a queen and cut the rest of the cells away. Either way works well.

I am well pleased with the American Bee Journal, and think it well worth the money invested. J. W. MCCALPIN.

Ontario, Canada, Dec. 19.

The Past Season's Report.

My report this year is: From spring count, 38 colonies, I have taken 1,000 pounds of honey. I build my hives two stories high, dovetailed bodies, and 8-frames each. I have not had a natural swarm from a two-story colony since I began using them, four years ago. My bees are Italians and hybrids. I leave 25 to 50 pounds of honey in the hive until spring, as it pays me better, and then no feeding, and I can sell the honey at better prices. I am a farmer, and make a regular hand in the field. I have a wife and sour small boys to support.

E. C. MURPHREE.

Blount Co., Ala., Dec. 20.

Somewhat Old Beginners.

I am 61 years old and my wife is 64, but we are beginners with bees. I have now three bee-papers to read. I need not keep bees for a living, but all my children have places of their own, so I must have bees and poultry in order to have something to work at. From 5 colonies I had bought last spring, I put into the cellar 21 this fall, but had only about 100 pounds of honey.

JAMES OLESON.

Chippewa Co., Minn., Dec. 18.

Bees Did Fairly Well.

My bees did fairly well the past season, considering the general complaint of a poor season. I had only eight colonies, and they averaged 40 pounds to the colony. I had no swarms during the harvest.

This is the first year that I ever took any interest in the bee-subject, but I am very much interested in it now. A. B. CROSS.

Meigs Co., Ohio, Dec. 19.

Please mention Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & CO.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 2.—The market is well supplied, especially with dark. Demand is fair for white and dark, and off grades are being neglected. We quote:

Fancy white, 12@13c; No. 1 white, 10@11c; amber, 9@10c; dark, 7@8c. Stocks of extracted of all kinds are light. White, 6½@7c; amber, 6c; dark, 5¾@6c; Southern, in barrels, 60 to 65c per gallon. Beeswax dull at 26@27c.

HILDRETH BROS. & SEGELKEN.

BOSTON, Jan. 9.—Fancy white, 13@14c; A No. 1, 12c; No. 1, 11c; light amber, 9@10c; buckwheat, no call. Extracted, white Northern stock, 7@8c; Southern stock, 6@7c. Beeswax, 27c.

The demand for honey seems to have dropt out of sight during the holiday season, but now that is over we hope to see a better call for it. There is abundance of stock on hand and it now looks as if the expected shortage would not materialize. BLAKE, SCOTT & LEE.

BUFFALO, Jan. 6.—Our honey market is very quiet. Finest 1-pound white fancy combs move slow at 12c—often 11c; excellent grades, 9@10c, and dark, poor, etc., 6@8c. Extracted, 5@6c. Beeswax, fancy pure, 28@30c; dark, etc., 24@26.

BATTERSON & CO.

CLEVELAND, Jan. 2. Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

A. V. BISHOP & CO.

Convention Notices.

Wisconsin.—The Wisconsin State Bee Keepers' Association will hold their annual convention at Madison, Feb. 9 and 10. It promises to be the best held for years. Every bee-keeper is urged to be present. An interesting program is being arranged.

Platteville, Wis. N. E. FRANCE, Sec.

Minnesota.—The following program has been arrauged by Pres. E. B. Huffman for the meeting of the Southern Minnesota Bee-Keepers' Association, which meets in Winona, Minn., Jan. 25 and 26:

Opening address—Pres. E. B. Huffman.

"How to prepare bees for winter, and the proper way to care for them"—Frank Yahnke.

"How to prepare a colony of bees for the introductiou of a queen, and the best way to introduce her"—C. A. Gile.

"Which is the most profitable to work for, comb or extracted honey, and the most suitable size hive for the same?"—E. B. Cornwell.

"What is the best size of hive, frames and sections for general use?"—S. W. Judge.

"The best way to manage bees for increase"—W. F. Martin.

"What is the best way, and the kind of hive to use, in stimulating bees, and also feeding them?"—John Turnbull.

Winona, Minn. C. A. GILE, Sec.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.
Please mention Bee Journal when writing.

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BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

Carloads of Bee-Hives

Sections, Shipping Cases, Comb Foundation, and EVERYTHING used in the bee-industry.

We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.
Hudson, St. Croix Co., Wis.
Please mention Bee Journal when writing.

IT WILL PAY YOU
TO ATTEND THE

Eclectic Shorthand College

Headquarters of the Cross Eclectic System.
Lessons by mail a specialty.
Send stamp for alphabet.

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

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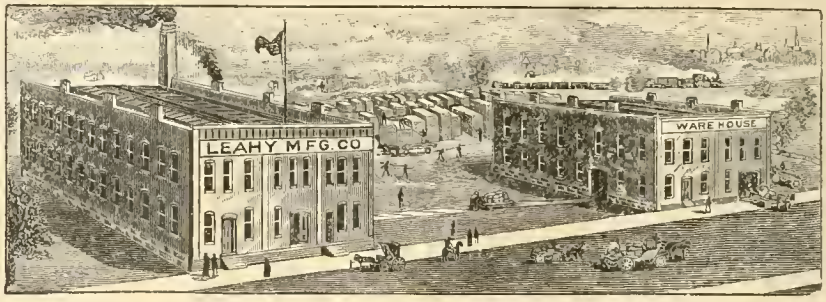

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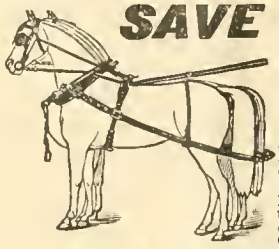

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ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JANUARY 26, 1899. No. 4.

CONTRIBUTED ARTICLES

Imported Queens Better than Home-Bred, Etc.

BY G. M. DOOLITTLE.

HAVING been laid aside for some time with fractured ribs and la grippe, a lot of correspondence, by way of questions, has accumulated, and with the Editor's permission I will answer some of them through the columns of the American Bee Journal.

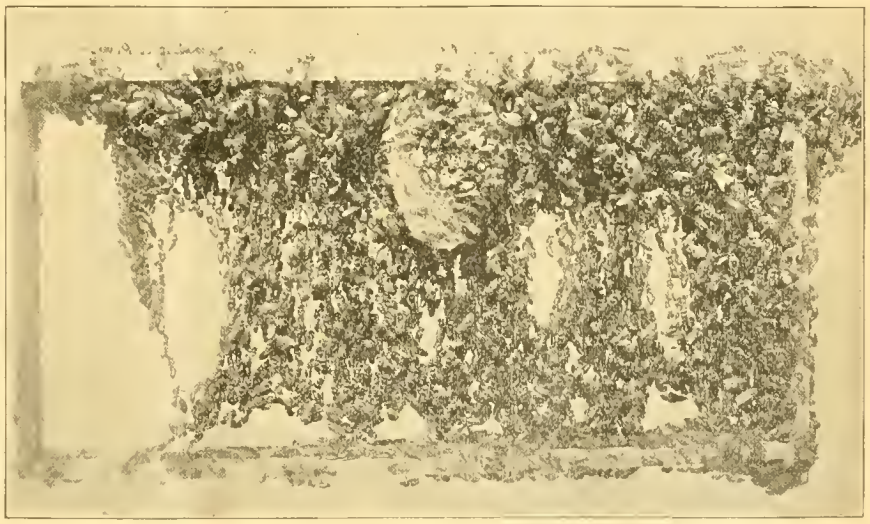
The first one I come to reads: "What do you think of the claim made by some that imported queens are superior to those bred in this country?"

From years of experience with both imported Italians and home-bred queens, I do not think that any proof can be found to substantiate such a claim. In fact, I believe the balance of proof is on the other side. Very many have written me that they would not exchange their home-bred queens for imported stock on any account, and their yields of honey are much increast above what they were when they first obtained Italian queens from the old country. Queen-breeders on the other side of the water do not take the pains in breeding that the Americans do; for, if I am correctly informed, the most of the queens sent over here, unless it is very lately, are from a promiscuous selection, mostly taken from second and third swarms, on account of these swarms not being likely to build up to make good honey-gathering colonies for the next season.

How much different the mode practiced by our best breeders! Queens are selected for generations, each selection being made from those which are the most hardy, and give the best results in every way; then the very best specimen is selected from the next generation, and so on, always selecting the queen each time which scores the highest number of points, till perfection is well nigh reacht. It seems strange that any one can believe that queens from a promiscuous importation will equal queens bred with such care and painstaking.

Where people are not satisfied with the stock they have, my advice would be for all those so situated, to buy an imported queen if they think them superior, and a home-bred one from some reliable breeder, and try the two equally, rearing as many queens from one as from the other, when they soon can tell which is the best for them. If they do not choose the home-bred queens, then they will be different from the majority of cases coming under my notice.

Group of Queen-Cells.



Bees at Work Building Comb.

GERMAN BEES—HOW LONG DO THEY LIVE?

Another correspondent wishes me to tell how long the German (or black) bee will live. Well, about as long as the bees of any other variety, tho I used to think that the Cyprian bees were a little longer lived than any of the other

varieties I ever tried. But as they were so vicious that no one could tolerate them, the length of life was not of sufficient importance to cause them to become a favorite with the apiculturists of the United States.

The length of life of any bee depends upon the season of the year when the trial is made, and the condition of the colony. If in the summer or working season, 45 days will be about the length of life the worker-bee will enjoy; while if during the fall and winter months, the time will be found to be from six to eight months.

For instance, if we take away a black or German queen about the middle of June, and introduce an Italian queen in her place, we shall have Italian bees hatching 21 days thereafter, which date we are to mark on the hive, as the time we are to count from, as there will be no black bees emerging from the cells after this. At the end of 40 days the black bees will be found to be very few in numbers, while at the end of 45 days not a black bee will be found in the hive.

If the colony is made queenless at the end of 20 days after the Italian queen was introduced, then the length of life to the workers will be prolonged on account of their not laboring so hard, for queenless bees never have the energy shown by those which have their mother with them; and it is the amount of labor done which has to do with the length of life given to our pets.

Again, if the change of queens is made during the fall months we shall find plenty of black bees the latter part of spring, altho they soon disappear after the active labor of honey-gathering comes on.

This length of life has much to do with spring dwindling, with preparations for winter, making new colonies, our surplus crop of honey, etc., and therefore should be understood by all. It is impossible to secure a good crop of honey where the most of the bees are nearly worn out with age just as the harvest is commencing; and where bees become uneasy in winter, and wear themselves out with worry, spring dwindling is sure to occur. So, all old bees in the fall will result in empty hives the next spring: and a divided colony, so made that one part contains all old bees results in no profit from that part. It is well to be practical along these lines, as well as all others pertaining to bee-culture.

ROBBING DURING THE HONEY SEASON.

Another bee-keeper wishes me to tell him through the columns of the American Bee Journal, whether bees are subject to robbing during a flow of honey, when the same stops for a day or two, writing thus:

"I see it recommended in a certain book that we should not try to remove the surplus honey from the hive immediately after a shower, in the honey season, for fear of robbing, thereby causing the bees to become very cross; the reason therefore being given that the shower had washt the honey from the flowers, hence the bees are eager to rob. Do you find this so? With me the bees do not offer to rob till a day or two has elapst after the bees have been gathering honey plentifully."

I would say that all my experience goes to prove that bees are not liable to rob during a honey-flow, for at times of plenty of honey they are the least liable to rob of any time of the year when they can fly. If the honey-flow has been only a very meager one, then bees may be inclined to rob after the stopping of that meager flow, but if the yield has been abundant then the case is different. During a heavy yield of honey which has lasted a week or more, the bees seem almost glad of a rest for at least 24 hours, especially if the weather is dull. I have taken off honey hundreds of times immediately after a shower where there had been an abundant yield before, without being bothered in the least by bees trying to rob. At such times each bee is so full of nectar that, if squeezed a little, it will throw the honey out on its proboscis; and if jammed a little too hard the honey-sac, filled with honey, would burst through the sides of the abdomen.

When bees secure honey rapidly, each bee takes all it can into its honey-sac, then throws it out again, and so on to evaporate the watery part of it; for all nectar when gathered is so thin that it needs much reducing before it is of the right consistency to be stored in the cells and sealed over. After all the thin nectar has been evaporated, then the bees begin to look around for more, and if the flowers fail to secrete any, robbing is the result, where honey is left exposed; and all wise persons will avoid leaving honey exposed at such times, or, in fact, at any other time.

Onondaga Co., N. Y.

The Best Size of Hive Considered.

BY C. DAVENPORT.

FROM what has since been said by some, I believe that my position in the discussion that took place sometime ago in regard to the best size of hive was somewhat misunderstood: on this account, perhaps, I may be allowed to say a few more words on the subject in this discussion.

I advocated the 10-frame hive as the best for the majority, or, in other words, for those who did not have the time or inclination to feed, which is more often necessary with 8 frames than 10; but I prefer, and use, a hive containing only 8 standard-size frames, and with them I can obtain more honey per frame, work, feed, and capital invested considered, than I can by using larger hives. But I have no doubt 10-frame hives, taking a series of years, would give better results to the average bee-keeper, for, as a rule, it requires a much closer attention to details when using 8-frame hives, but many years' experience with hundreds of colonies, and with hives of various sizes, has convinced me that a 10-frame hive is better than a larger one for the production of comb honey in the Northern States, and I will briefly explain why.

In the first place, here we have at the first but a short season. From the time the weather is favorable for brood-rearing there is what might be called but a short time until the white honey harvest commences, and I have found but very few queens that would keep more than 10 frames filled early enough so that the eggs would develop into field-bees in time to gather this white flow, for the fact should be borne in mind that it takes about 35 days for an egg to develop into a field-bee. Later, tho, a large percent of queens might require more than 10 frames if they were given the opportunity to develop there full laying capacity, but in this locality it is not only not profitable, but is a loss to have an immense force of bees reared at this time, for before they come into action as field-bees the white honey harvest is over; and while we sometimes get a fall crop here, many of these bees will be too old to be of much service in gathering a fall flow. But if otherwise, the dark honey they would be able to gather in the fall would not be worth the white honey which it has taken to produce, and which they have consumed. But, again, even if it was, it would be no plea for allowing them to be reared, for in the natural course of events, even with 8-frame hives, there will be a force of field-bees large enough to secure anything in the nature of a fall crop, which is likely to occur in this locality.

Some who have argued in favor of large hives have practically admitted all I have just said to be true, with the exception that it is still profitable to rear a large force of bees toward the latter part of the season, for in that case it is claimed colonies will go into winter quarters stronger, and have a much larger force of bees when brood-rearing is commenced in the spring; and that because this extra force of bees is present they will breed up and develop much more rapidly.

But the fact of this matter is, that in this locality at least, it is by no means the rule that these extra-large colonies will be any stronger by the first of next May or June than are medium-sized colonies of the previous fall. But I can understand that in some localities, where the conditions of the season are different from what they are here, they might be. Let me explain why they are not, as a rule, here.

In the first place, my present belief is that the most practical way to winter bees in this State is in some repository under ground. This means confinement of from four to five months, and bees reared the previous season and confined for this length of time live but a short time after they are put out in the spring—but a few days, comparatively speaking, of active work and they are gone. Of course, they last longer some seasons than they do in others, according as the seasons vary.

Here, in the spring, owing to reasons that I do not fully understand, extra-strong colonies in large hives seem to lose a larger percent of old bees sooner than do medium-strong colonies. One of the principal reasons for this is, I believe, owing to the fact that in the spring we have many cold, sunshiny days, when it requires all the force of a medium-sized colony to keep their brood warm. Extra-strong colonies having a larger force than is required for this purpose, more of them fly out and wear themselves out sooner in the chill air, roaming barren fields; and when a strong colony in a large hive becomes reduced to normal size in the spring, it is at a disadvantage so far as the size of hive is concerned.

Now, I do not wish it to be inferred that I am in favor

of weak colonies, for in this locality one of the main factors of success in the science of production of honey is to have strong colonies at the proper time; but in the production of comb honey, at least, it is also a very important factor to have these strong colonies in the right size of hive.

Let us take two strong colonies of equal strength at the beginning of the white honey-flow—one in an 8-frame hive, the combs of which are filled with brood and stores. If the other is in say a 12-frame hive, there will be, as a rule, two or three empty combs; this means so much less white section honey, for no colony will do section work with unoccupied comb in the brood-nest.

But it is claimed by many that a colony in a small hive is much more liable to swarm. This is not, however, usually the case here, for of the two colonies I have just described one is about as likely to swarm as the other, but the one on 8 frames will swarm a few days sooner, the other following suit as soon as, or very shortly after, the empty comb in the brood-nest is filled. That is, in a good season with nothing done to prevent or discourage swarming, for 12 frames of comb will not prevent swarming, 16 sometimes will, 24 will as a rule prevent all desire to swarm with any colony, provided they are also given additional room if it is required. But here it is a better season than we have had for sometime when a colony on even 16 frames will do much section work, that is, with only the bees which are the product of one queen. But I believe it is a fact which has often been announced, that a colony, no matter how strong, will very seldom swarm in any season if it has all the drawn empty comb in large frames that it can occupy. But can this means of preventing swarming be profitably practiced in even the production of extracted honey? I believe not, in my locality, unless the working force of two or more colonies are thrown into one.

Some experiments I have made in this line I may describe later. Southern Minnesota.

Why a Poor Season—Queen with the Swarm.

BY C. E. MEAD.

I WISH to tell why the past season was the poorest I ever had for honey. In March my bees flew strong, and with so many bright, well-favored young bees, I thought that they would need surplus room in fruit and dandelion bloom. But northeast winds prevailed cold and damp from off Lake Michigan. The field-bees that ventured out were chilled, and never got back to the hive. When I reacht home at night I would look first at the hives, and see the ground in the yard covered with bees loaded with pollen, honey and water, chilled and dead on the ground. Of course, what I saw was a small proportion of the loss, as most were chilled away from the yard.

I contracted the hive-entrances, and made them as warm as I could. Still the wind held in the northeast. It would be warm in the middle of the day and then clouds or a sudden, stiff lake wind would cut off all that were out. This kept up till the middle of June, with the result that my bees were weaker in numbers June 1 than on March 1, tho all the bees were young ones. They seemed to jump from weak colonies to full-sized ones by July 1.

In the first part of August the northeast winds again came on, and kept in that quarter the balance of the season, so my report is only 20 pounds of extracted honey per colony.

The most ambitious colonies suffered the most. Bee-keepers further away from the Lake, as the winds got warmed up by the time they got there, did not have the losses that I did.

Heretofore my hives have been full of bees when the first honey came—sometimes 20 Langstroth, and 16 Langstroth frames in two bodies high, and run that way through the season.

A YOUNG QUEEN WITH THE SWARM.

I have always said that the old queen always went with the first swarm. Well, she doesn't. I sold a queen to a man some eight miles away, and its colony swarmed in May. As he requested me to look over the new swarm to see if they had honey enough to last through the cold, wet, northeast rain, I found a big young queen with unclipt wings. I lookt over the parent colony, and found the old queen with clipt wing, and all the young queens and queen-cells destroyed, and combs full of brood and eggs; and the hive two stories high very strong in bees. I account for it in this way:

The bees wanted to swarm; the bad weather kept them back until the young queen got out, and as she could fly she went with the swarm, and the old queen crowded back into the hive. In the face of the bad weather they did not wish to swarm again. If it had been a case of superseding, the bees would not have destroyed all the cells, but would have reared one to share the hive with the old queen till the honey-flow became slack again; and then I think they stop feeding the old queen and let her die.

I found an old queen nearly dead on the bottom-board and fed her, and divided the colony (taking away part of the bees and the young queen), and then fed the old colony, and reared three fine young queens. I let one stay in the old hive and superseded the old queen.

I have tried three times to save a valuable breeder when she seemed to be as prolific as any queen, and for some unaccountable reason the bees were determined to supersede them. By rearing the cells in other colonies, cutting them out when "ripe," in each of the three cases the old queen died before spring. No matter what you may think, *the bees know before you can detect it*, when a queen is beginning to fail. Let them have their own way about that. Cook Co., Ill.

Winter Work in and for the Apiary.

BY F. A. SNELL.

WHERE the bees were properly housed in November, as they should be in our cold winter climate, not a great deal of work remains to be done with the bees, but it is important that this be done when necessary. If the bees are wintered out-of-doors, when snow-storms occur and the snow drifts so as to obstruct the hive-entrance and exclude air, it should be shoveled away as soon as the storm is over. If allowed to remain it may soon thaw and seal the hive-entrance with ice, and smother the bees.

With those who give no winter protection this work is of increast importance. I do not believe in having our bees buried in snow. The snow covering makes the hives warmer while it remains over them, and is almost sure to start the bees to brood-rearing, especially as late as the last of January or February, which is undesirable in our latitude during winter. There is danger of our bees having diarrhea from the activity and increast consumption of food thus caused, unless they have frequent flights, which is not apt to be the case.

Our bees, if buried for a time in snow, and a thaw coming later and melting the snow off, leaves the hives much colder if followed by cold weather, and the brood reared before is very liable to be chilled, the older bees die off, and by spring we have the so-called spring dwindling, which was caused by the early activity in brood-rearing, and the connecting increase of food consumed.

The dead bees that accumulated on the bottom-boards should be removed about once each month, wherever our bees are wintered, and the hives be kept sweet and clean by doing so.

When the bees are wintered in the cellar, the hives and cellar floor should be kept cleared of dead bees, and if signs of mice are found, traps should be set, and the mice caught. It is only a few hours' work each month that is needed to keep the hives and surroundings clear.

Hives, if to be made, can be put up at this time of the year, honey sections and cases put together, and be out of the way when the busy spring-time arrives.

As work is not crowding at this time of year, and our evenings are long, considerable time should be given to the laying of plans, and reading up in our pursuit. It is an excellent plan to get out the old bee-papers and look them over, always to find valuable ideas that we had nearly or quite forgotten. We will find numerous articles that will give us light on points we most need; read, too, each new number as it arrives in the mails. If not a subscriber to a good bee-paper, become one right away, for success depends very much upon the knowledge we possess. This we can only get by study and experience. At least one good book on bee-culture should be obtained and studied, which will prove a very pleasant work indeed. I well remember, over 30 years ago, when I was a boy, how anxiously I lookt for the then monthly arrival of the good old American Bee Journal, to which I at that time became a subscriber, and which I have taken and read ever since. The work, if such it can be called, was then, and has ever since been, a very pleasant one. I eagerly read all the books on bees that I could find. I was a real enthusiast. I believe no one can

reach even a moderate degree of success with bees unless he becomes enthusiastic.

Read, learn, study, and practice, are needed requisites to become a good and successful bee-keeper. For myself, I can find no more pleasing and interesting reading-matter than that upon bee-keeping, and such has been the case from the time I was taken with the bee-fever.

I have known of no one who was not enthusiastic in his calling to meet with much success. The present winter should be improved by thoroughly studying and learning our pursuit, at least by those new in the business.

Carroll Co., Ill.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Arranging the Hives—Comb or Extracted Honey.

1. In locating a small apiary of from 30 to 50 hives, which method of arranging the hives would you consider preferable—(a) leave a space of about three feet between each two hives (the hives will be in a long row); (b) or, group the hives in threes, leaving about a foot space between the center one and those right and left of it, and allowing about six feet between groups; (c) have you any better plan to offer than either of the above?

2. I can set the hives to face east (straight) or south-east (at an angle)—which would be the better?

3. In your locality, and taking an average season, what would you consider a fair cash return from 10 colonies—(a) workt for comb honey, (b) for extracted? IOWA.

ANSWERS 1. The groups of three will make it easier for bees and young queens to find their hives, but it will not be very convenient for the operator to get at the middle hive in a group of three. Better than either of these plans you will probably like having the hives in pairs, with not more than about four inches between the two hives in each pair.

2. You will not be likely to find any material difference.

3. I don't know. Perhaps $25 for either.

Temperature of a Moist Cellar.

Does it make any difference whether the temperature in the bee-cellar is high or low in regard to moisture in the hives in winter? IOWA.

ANSWER.—Yes, more moisture will collect in the hives in a cold than in a warm cellar, other things being equal. If a cellar is very damp, it will need to be kept warmer than if dry.

Quintet of Questions.

Last year I started in the spring with 12 colonies, increast to 19, and received about 200 pounds of honey. In this section the past year was very poor indeed.

1. Do you approve of full foundation sheets for a new swarm, in an 8-frame dovetailed hive? The reason I ask about foundation is, if you use full sheets, will not the deposit of wax the bees go with go to waste?

2. Which do you consider the more valuable for hives, basswood or pine?

3. Where can I get them, and what will a colony of Cyprian bees cost?

4. I know of some basswood trees about three or four inches through that I can get. Will it pay me to get them and reset near my apiary? How long will it be before such trees will bloom? There is quite a large locust grove not far from my apiary from which my bees get much honey.

5. Is rye flour the best for feeding bees for pollen when they cannot take a flight? NEW YORK.

ANSWERS.—1. Yes, it makes sure of having your combs all worker. It also makes sure of straighter combs than you can get in any other way. The bees will draw out the foundation only a little way, and then they will find use for the wax they have in finishing out the cells. Some excellent authorities prefer to have the first half of the combs built with starters, having full sheets of foundation for the last half. But it takes a good deal more care to get straight worker-combs without foundation.

2. Pine, by all means. Basswood is one of the worst woods to shrink and swell, and is not fit for hives or frames.

3. I don't know.

4. Very likely it may pay well to do so. It depends somewhat on circumstances. If they are within a mile, and not too crowded, so that if left they would grow up into good trees of their own accord, then it might not pay to touch them. But if they are crowded, or likely to be destroyed, it will be well to get them, especially if not plenty about you. Sometimes others will take and plant them as shade trees in reach of your bees. I've seen them blossom when five or six inches through.

5. Better not think of feeding rye or any other substitute for pollen when bees cannot fly. Leave them in quiet. Substitutes for pollen are to be fed in the open air when it is pleasant for the bees to fly, but have no natural pollen to work on. Just as soon as they can get genuine pollen they will desert the imitation article. What is best to feed is partly a matter of convenience. I think ground corn and oats has been more satisfactory than anything I ever tried, and I've fed bushels of it. The bees will work out the finer parts, and the coarser part that's left can be fed to stock.

Hive-Stands—Hiving Swarms—Foundation in Sections—Spring Feeding—Finding Black Queens.

1. How is the best way to make hive-stands? I have mine of four posts driven into the ground about six inches high. Is there any better way? I wish to put my hives in groups next spring, the same as you have yours. How much space should there be between each group? Please give full particulars.

2. If I hive a swarm in the forenoon, putting surplus case of the parent hive on the swarm immediately, can I wait until 5:20 p.m. before removing the parent hive to the new location, and putting the swarm on the stand of the parent hive?

3. When hiving swarms and putting section-cases of the parent hives on the swarms with excluding-board, how do the drones get out?

4. Please give the best way to put foundation in sections. I have been using full sheets ($3\frac{3}{4}$ x$3\frac{3}{4}$) but had two cases on a colony of Italians that were not built down to the bottom.

5. Do snakes ever trouble bees? A neighbor of mine told me he saw a snake near the entrance of two of his hives, and a few weeks later noticed they were weaker.

6. Give some good way to feed in spring. My book does not give full particulars. I would like to feed over the brood-nest. What kind of feeder do I want, and how do you keep the hive warm without enameled cloth? My hives have board covers.

7. I have a few colonies of black bees to which I would like to give Italian queens, but I am unable to find the old queens. Can you give me a sure way of catching them?

NEW YORK.

ANSWERS.—1. The best way to have hives arranged depends somewhat on the lay of the land, and other circumstances, but as a general rule it is doubtful whether any way is better than to have them in groups of fours, two hives side by side, and two others back to back to the first pair. Make a stand, not for each hive, but for each pair. It will take less work than to make a separate stand for each hive, and it's much easier leveling the larger stand. Set two hives side by side, facing the same way, with four or five inches space between them. Your stand must be just of the right size for those two hives to sit comfortably upon it when placed in that position. Each stand requires two pieces of board six inches wide. Common fence-boards are all right. Cut two of the pieces four or five inches longer than twice the width of a hive. Cut the other two pieces about as long as the bottom-board of your hive. Now nail the two long boards on the two short ones and your stand is finisht. Exceedingly simple, isn't it? Lay your stand on the ground where you want to place your hives, use a spirit-level, and make it perfectly level the long way. That will make the hives level from side to side. As to the other direction, let the stand slant a little forward, so water will run out of the entrances of the hive. Of course, if the ground is not perfectly level, you will have to block up the

stand to make it level, and in any case the stand should be blockt up so it does not rest upon the ground at any part. This is merely as a matter of economy to keep the stand from rotting. The long boards of the stand will be uppermost. If your rows run north and south, one pair of hives in the group of four will face east, and the other pair will face west, the two pairs standing back to back, with perhaps four inches between them.

2. If I understand you correctly, it wouldn't be advisable. Your idea seems to be to hive the swarm wherever it happens to cluster, put supers on, and let it stand there till evening. During that time some of the bees will have markt their location and commenced work in the fields, and when you move them there will be some trouble next day about their finding their home. But if circumstances are such that you must leave them till evening, don't change the super to the swarm till you move it to the new place.

3. They don't get out. They stay, and in course of time die there if not let out. But it doesn't seem to trouble the bees a great deal to have their dead brothers lying around.

4. If you want to make sure of having sections built down to the bottom, put in a bottom-starter ½ or ⅝-inch deep, and let the top starter come down within ¼ or ⅛-inch of the lower one. ⅛ is probably better than ¼. I have used these bottom-starters for years, and with great satisfaction.

5. I have found snakes under hives a good many times, and sometimes in them, but I never thought they did any harm.

6. Probably nothing would suit the bees as well as to be fed with combs of sealed honey. But as you say you want to feed over the brood-nest, it is likely you haven't the combs of honey. To suit your desire, it isn't likely anything would do better than the Miller feeder. As furnisht by supply dealers, it is usually made to fit 8-frame hives, but it could be made of any size. All you would have to do would be to put the feeder on the hive, put in some sugar, pour on some water, either cold or hot, then put on your board cover. If you don't want to be to the expense of a feeder, and are willing to take a little more trouble, use the crock-and-plate plan so many times described in past numbers. If you can't find it easily, ask for it about a month before you want to use it and it will be described again.

7. Hunt carefully. Don't get the bees stirred up to run, and if they start to run give it up till another time. You can strain out the queen with a queen-excluder. Put the excluder, or queen-trap, at the entrance of a hive containing one or more frames of brood. Shake or brush the bees down in front of the entrance. The workers will go in, but the queen will be outside with whatever drones are there. Another way is to put an empty hive over another, having an excluder between. Have one or more frames of brood in the lower story. Brush the bees into the upper story. The workers will go down to the brood. If they don't go fast enough to suit you, poke them up a little. The queen will be left above.

Question About Getting Apis Dorsata.

How can I have the giant bees sent from India? How should they be sent—by mail or express? Would they have to be fed on the way? Will they live in this climate? I belong in Bombay, and can get the bees sent to me if I give directions about sending them. CONNECTICUT.

ANSWER.—It is so difficult to get them to this country that no one has yet succeeded in getting them here. Perhaps the only way you could succeed would be to have them sent with some one coming this way who would see to properly supplying their wants on the way.

Keeping Young Queens.

If one rears queen-cells like Doolittle does, would it do to put one cell in a cage and three or four cages and cells in a nucleus, let them hatch and confine them in cage until the first queen has mated, and release one at a time as fast as the mated queen is removed? Would bees feed caged queens if the plan would work? A great many cells could be saved in a season. NEW YORK.

ANSWER.—You can keep a number of cells in cages in a hive, and the bees will take care of the young queens generally as they emerge, but you must have each young queen in a separate place to be fertilized and commence laying. You may, however, have two queens or more taken care of by one colony, if the queens are barred from each other and far enough apart. If a laying queen is in the lower story, you may have a young queen in the third or fourth story, with an entrance there, and she may go out and become fertilized, and then begin laying all right in that upper story.

Feeding Bees in Winter.

I have one colony to feed. Tell me how to feed them at this time of the year, and what is best to feed.

KENTUCKY.

ANSWER.—It's a bad thing to need to feed this time of the year. Be sure to look out for that next August or September, and see that every colony has more than enough to keep it through the winter. The best thing to be done now is to give the needy colony a frame of sealed honey, putting it close to the cluster of bees. Like enough you have no such frame of honey, and must resort to candy. Use best granulated sugar with enough water to dissolve it (it will take nearly half as much water by measure as sugar), boil till threads of it break like pipe-stems when dropt in cold water, pour in a greast dish so as to make cakes half an inch to an inch thick, lay these on top of the frames and cover up warm. Be sure not to burn the candy.

CONVENTION PROCEEDINGS

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 38.]

SINGLE-TIER VS. DOUBLE-TIER SHIPPING-CASES.

J. N. Pease—Is a one-story shipping-case better than a two-story?

F. Rauchfuss—I have had no experience in shipping the one-story cases. When we ship by the carload, we want them all of one kind.

Mr. Pease—Don't the Chicago people want the single-tier cases?

F. Rauchfuss—Altho the Chicago market may prefer the single-tier, we have so far found no objection to our double-tier case. It is not so much a question of convenience to the buyer as of convenience to some other people. In the East, thin honey may do more damage in double-tier cases than in single-tier. But here, that is not very much of an objection. The honey is heavier. If a double-tier case is used, always put a sheet of paper between the two tiers; then if there is a little leakage it will not injure the lower tier.

Mr. Adams—Orders to us in northern Colorado have required double-tier cases this year. No reason was given.

Mr. Pease—It is easier to examine the honey in single-tier cases.

Mr. Honnett—A firm in Chicago said they preferred 12-pound cases, which of course are single-tier.

WISCONSIN VS. OHIO BEE-SUPPLIES.

QUESTION—Would it not be to our interest to insist that our supply dealers keep more Wisconsin than Ohio goods?

This question was mainly discust with reference to sections and shipping-cases, tho hives were also toucht upon. The preference of those who exprest themselves was for Wisconsin goods. It was also said that it was simply a business question, as there was no difference in prices; but there seemed to be more demand for Ohio goods, because the Wisconsin factories dealt in wood alone, while other articles as well could be ordered from Ohio.

FLAT COVERS AND SUPERS IN WINTER.

Mrs. Booth—If we want anything good, we want good hives. I don't like the flat cover for wintering. I will have to put supers on mine in order to get air above.

Prof. Gillette—I use supers in winter, filled with leaves.

Chaff may be used. I have had no experience with any other than flat covers.

E. Milleson—Anything may be used in the super which will not attract mice.

M. A. Gill—I have become thoroughly converted to the flat cover. A colony of bees in Colorado should always have the super on. I use leaves. In this climate, ⅜-inch stuff with light nails will not stay in its position in the cover. The Higginsville cover is not reversible; it is light, and after the first year it shrinks. A cover of ⅞-inch stuff, thoroughly painted on both sides, is best. I have noticed covers while inspecting three or four thousand colonies, and have found the flat cover best.

W. W. Whipple—I have used the flat cover. I fix up my bees the last of August. I use no blanket, but let them seal the cover tight. I tip up the hive two inches, with plenty of ventilation below, and leave until spring. I have no trouble in wintering bees.

MORE ON THE SUBJECT OF SPRAYING.

Prof. C. P. Gillette, Professor of Entomology at the State Agricultural College at Ft. Collins, then read a paper. Before doing so, he again referred to the spraying law, saying it was never necessary to spray until the blossoms had all fallen, and that to get the best results it is better to wait until a week after. There will be some trees, such as the Duchess, which will bloom early, and if one waits until a week after the late trees have bloomed, the early trees will have closed the calyx, so that the poison cannot enter in. Hence it is best to keep watch of the early bloom, and not spray the whole orchard at once. If ever necessary to spray for fungoid diseases, the Bordeaux mixture should be used. This is harmless to bees, and the only effective remedy for those diseases. The following is Prof. Gillette's paper:

Experiments with Drawn Foundation.

Last spring I obtained a quantity of drawn comb foundation from the A. I. Root Co., for the purpose of comparing its use in sections with the use of the ordinary thin foundation. In order to make a proper comparison the sections were filled half with drawn and half with plain foundation, the foundation extending about two-thirds of the way down in the section so that the lower third would be, in each case, all natural comb.

There was no question but what the bees went to work more freely upon the drawn foundation. Some of the colonies worked for several days upon the drawn foundation before beginning on the undrawn.

They do not, however, begin storing honey at once in the partly-drawn artificial cells. They never fail to go over every part of the surface of the cell with their mandibles, so biting and roughening it as to render it more translucent. After the cells had been worked over, and before they had been drawn out farther, the thickness was found to be reduced about one-sixteenth of an inch, or, in round numbers, the whole thickness was reduced one-sixth.

Another advantage from the use of the drawn foundation was in the tendency to unite the sides quickly and completely to the section without leaving holes for passage-ways. Where there is a thin foundation only, this is often done, but the bees seem to be loath to tear down the comb-cells for this purpose. It was also noticed that sections having the drawn foundation were, on an average, built more strongly to the sections, and with fewer passage-ways through the sides and corners.

The sections on being removed from the hive were as white and beautiful as any, and I doubt if any but the most notional would detect an unpleasant flavor or thickness to the comb. But if the honey be extracted and the comb washt and examined, it will be noticed that the lower half of the cells, and the septum, are of an amber, or beeswax color, quite in contrast to the exquisite whiteness of comb that has been entirely made by the bees.

I found that after carefully removing the cells from the septum in natural comb that it would require an average of 18.8 square feet of the septum to weigh a pound. From similar computations I found that the septum of comb built from drawn artificial foundation only required 13 square feet to the pound. At the same time I found that the septum of the artificial drawn foundation, after the removal of the cells, would require 21.8 square feet to weigh a pound, which shows that the artificial septum, before it is workt, is lighter than the natural. This seemed to me to indicate very strongly that the bees, instead of thinning this foundation, really thickened it by adding to it.

To further test this point, I took samples of foundation of three different weights, one being a very heavy product of home manufacture obtained from Mr. Frank Rauchfuss; another was a medium-weight brood-foundation, and the third was a good quality of very thin foundation for use in sections. In each case I carefully weighed accurately measured pieces of foundation before the bees had touch it, and then similar pieces of the septum of comb built on each kind of foundation, and the following table shows the results:

WEIGHTS OF FOUNDATIONS AND COMB SEPTA:

	Heavy Foundation		Brood Foundation		Thin Foundation		Drawn Foundation		Natural Septum.
	Fdn.	Sep.	Fdn.	Sep.	Fdn.	Sep.	Fdn.	Sep.	
Weight per sq. inch.	10.4gr 11.0	7.8 gr	8.8 gr	4.7 gr	4.1 gr	3.7 gr 2.7	2.06gr 2.40	4.10gr 3.20 3.86	2.05 grains 2.50 3.20
Average weights.	10.7	7.8	8.8	4.7	4.1	3.2	2.23	3.72	2.58
Sq. feet in a pound.	4.5	6.2	5.5	10.3	11.9	15.2	21.8	13.	18.8
Weight reduced.	25 percent.		46.6 percent.		22 percent.		Increast 67 percent.		

The table shows very conclusively, as do the samples of foundation and comb septa that I here show, that in cases where heavy foundation, or even the thinnest of ordinary foundation, is used, the bees thin the foundation before storing honey upon it.

The added weight in cases of drawn foundation seems to be due largely to thickened deposits made upon the septum along some of the angles, and not to an even distribution of the added wax. These thickened deposits may be plainly seen by looking through the comb towards the light. These deposits are much more abundant in some pieces than in others, and just what their occasion may be I cannot say. Perhaps the angles at the bottom of the cells are not just as the bees would make them, or perhaps there are other imperfections in the cell that the bees cover over. These deposits are absent in natural comb, and I find very few of them in comb built from ordinary plain foundation.

According to the weighings that I have made, the amount added is equal to about two-thirds the weight of the septum in natural comb, so the saving of wax from the use of the drawn foundation would not be as much as would at first seem.

On the whole, I am pleased with the drawn foundation, and would heartily recommend its trial, at least, by the practical bee-keeper who wishes to obtain the largest possible crop of comb honey. C. P. GILLETTE.

The samples of foundation and septa which Prof. Gillette past around for inspection were arranged in pairs, clampt between pieces of section-wood fastened together with light nails, and illustrated his points very fully and satisfactorily. Besides these were several sections of comb built on drawn foundation, etc. One of these contained a starter of the heavy brood foundation referred to, which had been blackened at the lower edge, and then left with the bees a short time. This showed the cells scarcely begun, but streaks of black where the foundation touch the wood at the sides and above, and also down at the bottom of the section, where the V-grooves fold together, showing that the wax obtained by thinning foundation may be taken away and used elsewhere.

Commenting on the reason for the deposition of wax in drawn foundation, Pres. Aikin said that when bees begin to draw out ordinary foundation they make the bases of the cells of a rounding or concave form. He inferred from this that the cell-base is first made concave, and afterwards flattened. When drawn foundation is given, the side-walls are so high that the bees may not be able to manipulate the bases, but, instead, they round out the sharp angles at the juncture of the wall with the base. The less side or cell wall to begin with, the better they will thin the base. He was also of the opinion that home-made foundation is not prest so hard as the factory-made, and therefore is more easily workt by the bees.

Mr. Porter—Do you suppose that bees ever gather wax to make comb? I had always supposed that wax brought in from outside was used in the same manner as propolis.

Prof. Gillette—I don't know. I might mention here a circumstance of a different nature that seems worthy of re-

mark. In an experiment to find the amount of honey necessary to produce a pound of wax, four pounds of bees were kept in a building, in hives, for three weeks. Some of them then accidentally escaped, and instantly went back to their old location.

C. H. Gordon then spoke of his intention of starting a semi-monthly bee-paper for the West, and his confidence in its success.

H. Rauchfuss—It all depends on what the paper will be.

Pres. Aikin—Mr. Gordon consulted me on the subject. I told him it would unquestionably be a great thing for Colorado, tho I would not vouch for the Association.

Mr. W. L. Porter then read the following paper, on

The Wax-Extractor.

In all branches of business, success and prosperity come from saving of small things. It is so in bee-keeping. The honey has its origin and is stored in the most tiny drops in the flowers; the wax is secreted and formed in minute scales on the bee's body; and both, in their aggregate, amount to an enormous sum. From this we may learn a valuable lesson—that no matter how small a thing is, if it has value it is worth preserving.

The solar extractor is an invention which separates the wax by the sun's rays. In this bright, sunny climate there are many days in the summer when it can be used to an excellent advantage; and every bee-keeper who has a few colonies of bees should be the owner of one. To get the best results from the machine, it should be placed in a sheltered place where it will have the reflection of a fence or building. The machine should be loaded in the morning, with the glass and pan tipt to the south, by placing in the pan a layer of broken comb cappings from extracting honey, or the scrapings of sections, etc. The sun will do the rest, and at night a beautiful yellow cake of beeswax will be secured.

It should be of the right capacity for the work. For a few colonies—any number up to 50—a small machine will do; one like the Simplicity, with glass 16x22 inches, is ample. But as the colonies increase, greater capacity of glass is needed. I have made a very effectual one this summer from a hot-bed sash, 3x6 feet, with a strip of corrugated iron for a pan.

One of the difficult problems with me has been to keep the residue from sliding on the pan, and either going into the wax-pan or damming up the screen and preventing the wax from going through. To prevent this, I have found it an excellent plan to place a sheet of wire cloth on the bottom of the pan, with a few small cleats under the wire to give drainage. The roughness of the screen prevents the residue from sliding, and lets the melted wax drain through at once. When the wax is all out, the wire can be raised out, and a quick shake will throw all the residue into a box where it can be kept for kindling the fire, for which it is excellent.

Bee-keepers should be careful to save everything that has wax in it, as the demand for wax is constantly on the increase. W. L. PORTER.

Mr. Foster—I had difficulty in getting the wax into shape, until I used the plan of the Rauchfuss brothers.

F. Rauchfuss—The only point about that is the way the wax is caked. All other extractors have but one pan. Ours has a series of pans connected by overflows. This keeps the honey and sediment practically in the first pan. The best time to open and fill the solar extractor is early in the morning, to keep out the flies. If opened at any other time, flies and bees will be trapt and will become imbedded in the wax. One of our 4x4 feet extractors last season remelted 900 to 1,000 pounds of wax.

H. Rauchfuss—The pans that form the wax have to be exposed to the sun until evening.

F. Rauchfuss—It has never been advised to place an obstruction in front of the screen; but if there is nothing but the wire screen at the end of the pan, a great deal of fine sediment will go through. To avoid this, place some slumgum in front of the screen.

Mr. Adams—I discarded wire screens, and used a piece of glass in front of the screen.

Mr. Porter—Have you ever tried a wire screen on the *bottom* of the tray that holds the comb? I have discarded wire screen at the end. I use a piece of common wire screen.

Pres. Aikin—I tried a piece of wire screen on one portion of a 6x6 extractor. But then I was melting a great many combs. I found that sediment so entirely clogged the screen that the wax flowed over. I have anticipated using four or five meshes to the inch. Not much will go through if it is not stirred; but it ought to be stirred if old combs are melted. Still, the screen is a good thing. In building a wax-extractor, do not build too small. A large one does not cost much more. You can put a large load in and let it stay a long time. It will surprise you to see how much drains out after several days, or even a week.

Mr. Foster—I use a hot-bed 3½x10 feet, and put all my dishes in. I use the same thing to raise cabbage-plants in spring.

Mr. Sylvester—In stopping the debris, I have found it a success to use excelsior for a dam.

A Member—What do you make your pans of?

Pres. Aikin—I use tin pans. You must not use rusty tin or iron, especially if there is water with the wax.

H. Rauchfuss—What discolors the wax in melting with water? Wax produced by the solar extractor, when remelted with water, turns greenish.

Pres. Aikin—I suspect that we darken wax by using water. It may be iron in the water. I do know that the blackest combs, when melted by dry heat, yield nice yellow wax. But if you melt the same old combs in water, you get dark wax. That is a point in favor of the solar extractor. Altho I have melted tons of wax, I have never succeeded with water as I have with the solar.

Mr. Gordon—Cannot darkened wax be restored in the solar extractor?

Pres. Aikin—To a limited degree, as the result of bleaching.

Mr. Adams—I have tried sheet-iron, galvanized iron, and tin. Wax is blackened by sheet-iron, and sticks to galvanized iron.

Mr. Foster—Can we depend on the solar extractor, when properly workt, to get out all the wax that can be obtained?

Pres. Aikin—If you build a *big* solar you can. You can't get enough wax out of the residue it leaves to pay for the trouble of working it. You can with pains get a little more wax, but it will be as black as my boot.

[Continued next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. JANUARY 26, 1899. NO. 4

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

All Re-Elected.—There were 229 ballots cast in the election just held for General Manager and two members of the Board of Directors in the United States Bee-Keepers' Association. All were re-elected—General Manager Secor receiving 210 votes; for Directors, E. R. Root, 182; and E. T. Abbott, 150.

It seems that only about one-half of the membership voted. We hope that all paid their annual dues, for if the attempt is to be made, as now contemplated, to enforce anti-adulteration laws, more money will be needed to carry on the work. This is a matter in which *every* bee-keeper in the land is interested, and all should help in the work.

Newspaper Clippings about bees are appreciated when sent to us, even if we do not reproduce them in the Bee Journal, or acknowledge their receipt. It helps us to keep informed as to what is being said in the newspapers, and sometimes gives us an opportunity to say something that may be of interest to all.

So we will thank our readers if they will continue to send us clippings of what they find about bees in the newspapers they read.

A Pure Food Law in Each State, with a State inspector to whom any one may send samples of suspected adulteration for analysis, and who shall have full power to prosecute those guilty of adulteration, with fines for first offense and imprisonment for repetition—that is what F. A. Snell, in Gleanings, says is needed.

Southern Honey.—Mr. O. O. Poppleton has had much experience as a bee-keeper in the North and South, and also in Cuba. He says in Gleanings that the honey-region of the North is a comparatively narrow strip with less than a dozen species of flowers yielding honey enough to affect the general markets. A greater variety exists in the South, on account of soil and climate. "One can journey on a railroad train, between sunrise and sunset of any day, and not a single flower that yields honey where he started from in the morning will be found where he is at night," so great is the variation as the tropics are approacht. Florida may be divided into three sections, each having its own kind of honey. A large part of Texas honey differs from all other Southern honey. So it is all over the South, so that no one man knows all the varieties of Southern honey. No one kind predominates in the South, as does clover, linden or buckwheat in the North. The kinds vary from the mildest to the strongest, from the whitest to the blackest, and from extra light in weight to the heaviest.

Central and Northern California are getting enough rainfall, judging from the following paragraph taken from a letter written us by W. A. Pryal, of Alameda county, Jan. 10:

"Our 'dry season' is over; we are having very copious rains. Tho they are bringing the rainfall up to the average in central and northern California, the precipitation is not all that could be desired in the lower counties. Still, I have not the least doubt but that portion of the State will have plenty of rain yet. I trust so, as they need it badly. The rainfall up this way is in excess of what it was for the whole of last season. The mines will again boom; so will farming."

Bees and Flowers.—H. W. Brice says in the British Bee Journal:

"What flower show or horticultural fete is now really complete without its bee-department? So much have honey and bees become associated with flowers, fruit and rural festivities, that the first thing sought for by many visitors on such occasions is 'the bee-tent.' This is, of course, as it should be, seeing how dependent one branch of horticulture is upon the other."

It might be a good thing if we could imitate our British brethren in this regard.

A Bear-Proof Apiary is described by "Rambler" in Gleanings, and illustrated. A platform is built about two trees, too high for a bear to reach its edge, and if he attempts to climb one of the trees he merely buts his head against the platform. A movable ladder gives the bee-keeper an easy ascent. About 20 hives are on a platform. Keeping bees on trees is getting almost back to Nature's way!

Comb Honey is reckoned officially at 12 pounds an equivalent of one gallon of extracted, for duty purposes. More or less of the comb honey product comes over the Canadian frontier.

United States Bee-Keepers' Association is the way it will be spoken of hereafter instead of the United States Bee-Keepers' *Union*. We learn this from General Manager Secor, who wrote us Jan. 14 the following on a postal card:

You can write our name now as "United States Bee-Keepers' ASSOCIATION." The votes coming in indicate that all amendments are carried *big*.

Mrs. Secor is not up yet, but I am all right. Just closed a $60,000 deal. How's that for a bee-keeper?

EUGENE SECOR.

We regret to learn that Mrs. Secor is not well, but are very glad that the General Manager is "up and at it again."

It seems to us that a man who can handle a deal involv-

ing $60,000 is a good deal the kind of a man to have as General Manager of the United States Bee-Keepers' Association, especially as it contemplates dealing with adulterators of honey, and other frauds that threaten bee-keepers or their product.

But perhaps Mr. Secor will not thank us for telling thus publicly one of his private business affairs. And yet, what harm can come from bee-keepers advertising to the world the business capabilities of a man whom they all claim as their own? We contend that Mr. Secor *belongs* to the bee-keeping public, for is he not their valued servant? Most assuredly he is. And one that they all delight to honor, as well as to appreciate his excellent qualities.

Now, Mr. Secor may be inclined to blush at these remarks. All right, for it will be an honest blush, if he does. We believe in giving a few "flowers" to a man before he dies, rather than leave them all for his funeral.

Cuban Honey.—The kinds of honey in Cuba are much fewer in number than in our Southern States. Two-thirds or more of the honey that will come from Cuba will be from bellflower, says Mr. O. O. Poppleton in Gleanings. It is like white clover in color and body, but a trifle milder, selling perhaps better than linden, but not as well as clover. Other Cuban honey is dark and strong, not as good in body or flavor as buckwheat. Editor Root thinks bellflower will compare favorably with our light honey, only some may think it *too* mild. As to Cuban competition, he thinks we will have to grin and bear it, altho he seems to get beyond his depth when he contemplates honey produced for 2 cents a pound, and almost the year round.

COLUMBUS COMMISSION AND STORAGE CO., of Columbus, Ohio, seems to be out of existence now, as we received a card from their postmaster a few days ago telling us that the firm is "Defunct." Our readers will please note this, and not ship any honey to them.

* * * * *

MRS. EMMA WOODMANSEE, of Arapahoe Co., Colo., writing us Jan. 9, said:

"I enjoy reading the American Bee Journal, and look anxiously for its arrival each week. I have learnt a great deal from reading what others write."

* * * * *

MR. WM. H. EAGERTY, of Republic Co., Kans, gives his estimate of the "Old Reliable" in these words:

"I feel that the American Bee Journal deserves the support of every bee-keeper in the land for the stand it took against fraudulent commission-men, thereby saving many hundreds of dollars to bee-keepers."

* * * * *

MR. W. A. RYVAL, of Alameda Co., Calif., writing us Jan. 10, had this to say about the present "new" appearance of the old American Bee Journal:

"I like your new dress. I suppose, like most editors, you put it on the paper instead of on your back. A publisher feels happy when he can come out with a new typographical dress, as well as with a fine suit of clothes. It is almost a standing joke that a newspaper man cannot do both at the same time. I trust, tho, that you have been able to do both."

Well, Mr. Pryal, that depends upon the prices of the "dress" and suit. If the "dress" costs several hundred dollars, then of course the suit would have to be rather inexpensive. And that is the way it is this time. Little does the average reader know of the cost of getting out a paper like the American Bee Journal *every week*. And yet it is furnisht at the very low price of $1.00 a year. You would hardly believe it, yet there are actually some bee-keepers who write us that if we will take 50 cents a year for it they will subscribe! Such fellows are too cheap to notice. Why, they couldn't appreciate any kind of a bee-paper. And yet, we wouldn't be surprised if such specimens spend annually for tobacco from ten to twenty times the regular subscription price of the American Bee Journal.

But some people always expect to get something for nothing. There is need of cultivating a little more honorable spirit among such folks—a spirit of willingness to pay what a thing is worth. No up-to-date bee-keeper, or one who desires to be up-to-date, would do without the American Bee Journal if the price were $2.00 a year, as it used to be when it was only a monthly. At least that is what we are often told.

* * * * *

MR. L. D. STILSON, of York, York Co., Nebr., is trying to get a collection of different samples of honey to place in their State University, and wishes to secure samples of Cuban or other foreign honey; also palmetto or cotton-bloom honey, three to five pounds of each kind. Any one who can help Mr. Stilson, will kindly write him before sending him any honey.

* * * * *

MR. MARK DAVIS, a bee-keeper of Dupage Co., Ill., died Jan. 13. Mr. Harry Hatch kindly notified us. Mr. Davis was one of the first bee-keepers of that county. He had kept bees continually for 25 years, and until the last year or two he was regular in attendance at bee-keepers' conventions. He was a member of the Illinois Bee-Keepers' Association. He was 73 years old.

* * * * *

MR. AARON J. JOHNSON, of Monmouth Co., N. J., wrote us Dec. 5, when remitting for 1899:

"I have read copies of the different bee-papers, but the American Bee Journal takes the lead of them all, for me. Different things that I have wisht to learn at times have been answered in the Bee Journal right 'to the t.' I wish it continued success."

* * * * *

THE LEAHY MFG. CO. claim to have "spent about $5,000 for improvements" in and about their bee-supply factory the past few months. They say: "We expect, too, to take care of the trade; but of this we are not so sure." Well, if they should be unable to "take care of the trade," there are some others that can do it very well—or at least they'll make a big "try" at it.

* * * * *

MR. FRANK MCNAY AND WIFE, of Columbia Co., Wis., are spending the winter in Southern California, as announced in these columns some time ago. A letter to us dated Jan. 10, reads as follows:

FRIEND YORK:—We have now spent almost six weeks in this land of sunshine and flowers, and have enjoyed it very much, as the weather has been very nice for wheeling, and as we brought our pair of Rambler wheels with us. We find nice, hard roads here, both in the cities and country, and my cyclometer shows 600 miles of travel since arriving here. You can see that we are not losing much time on account of bad weather.

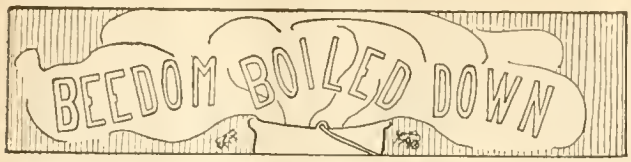
But the lack of rain is making the bee-keepers and all other residents begin to feel gloomy, as the rainfall only aggregates a little over two inches, which is extremely light for this date. Still, there is hope for an abundance yet.

The American Bee Journal is the only publication that has followed us up promptly and regularly.

Truly yours, FRANK MCNAY.

We are pleased to know that our big bee-keeping friend, and wife, are having such a nice time this winter. But if California bee-keepers don't get their necessary "wetting" pretty soon, their honey crop will likely be both "short and sweet," when they all hoped it would be "long and sweet" this year. We trust they may yet have rain enough to insure at least an average crop.

The Premiums offered on page 30 are well worth working for. Look at them.



Dilute Honey Before Boiling, in case of boiling foul-broody honey, says Revue, by adding 25 percent of water. Otherwise the honey will be burnt.

Taylor's Swarming Device is not a success with some, says Editor Holtermann, of the Canadian Bee Journal, because they put the bees in the new hive too soon, before they have time to settle. Let them first settle in a cluster in the catcher, then they will stay quietly where they are put.

How to Rear Giant Queens.—C. T. Bonney uses the Doolittle method of rearing queens and by making cell-cups $^1/_3$ or $^1/_2$ larger than common, he has reared the largest and most prolific queens he has ever seen.—Gleanings. But does not Doolittle say that medium-sized queens average better than very large ones?

Comb vs. Extracted Honey.—The editor of the Canadian Bee Journal has been doing some figuring. Sections, foundation and shipping-cases are estimated to cost about $2^1/_4$ cents a section. Deducting this leaves $6^1/_4$ to $18^3/_4$ cents a section for Canadian comb honey. Extracted sells within $^1/_4$ to $2^3/_4$ cents of this price, and considering the difference in amount obtained, he thinks it does not pay to produce comb honey with the present market difference.

A Good Colony of Bees in Early Spring was some 15 or 20 years ago defined by the New York Bee-Keepers' Association to be a colony with bees clustered in five to seven of the spaces between the combs, the bees nearly touching the sides, bottom, and top of the hive in the center ranges, and at the outside covering a surface as large as the hand, thus occupying four to six combs on a cool morning in the forepart of April.—G. M. Doolittle, in Progressive Bee-Keeper.

How Long Bees Live on Honey they Can Carry.—M. de Layens put bees in a dark cellar with only what honey they had in their sacs, leaving them in quiet. No extra mortality was shown till the 8th day, when the bees began dying, and would soon have starved if they had not been fed. G. Butet thinks they would not stand it so long under ordinary circumstances, and thinks it wise to feed a new swarm in four or five days after hiving if the weather is such that they can get nothing from outside.—Bulletin Bourguignonne.

Bees for Honey.—While in a good season the difference in colonies is not so noticeable, the past poor season has brought out a strong contrast, says Harry S. Howe, in Gleanings. Young queens gave best results, especially queens reared after the honey-flow the previous season. He has preferred blacks heretofore because he can work faster with them, but the past season has convinced him that he will get more honey with Italians or Carniolans. W. L. Coggshall is with him in his change of opinion, and will spend $50 in the spring for queens to change his stock.

The Honey Harvest and its Signs. In general, wet years are not good honey-years. Those tolerably dry but not too dry are best. Bright sunshine is favorable, if not too dry. Flowers yield most when giving out the strongest fragrance. Especially is this true of buckwheat, which yields no honey when it yields no fragrance. When a good yield is on, the bees start out eagerly early in the morning, the alighting-board is black with bees that drop heavily with their burdens, and in the evening the ventilators are very busily occupied. But the best way of judging as to the gain is by means of weigh-scales. Bulletin Bourguignonne.

Sweet Clover in a Dry Spell was a boon to Thaddeus Smith, as he reports in Gleanings. It afforded his bees good pasturage in a very dry spell in July and August, when there was nothing else for them. He found the honey dark and unpleasant in taste. A. I. Root thinks there may be some mistake about this, saying he never saw any sweet clover honey that was dark or unpleasant. As a forage crop, Mr. Smith says of it:

"I am pleased with my experiments with sweet clover. Cut when young, and fed to cows, in stall, they ate it greedily. It will bear cutting two or three times or more. I plowed some under in my young peach-orchard, and planted late sweet clover. Turning under such a large amount of tops and roots can't help being beneficial. I am satisfied there will be no trouble to prevent its spreading where I don't wish it—not more than other clovers or weeds."

How Long Shall Foul-Broody Honey be Boiled?—I shall be glad to believe that it is necessary to boil foul-broody honey only "several minutes;" but please remember that we have the following to face, which stands yet as a fact: "Prof. Mackenzie secured growth from spores after they had been kept at 212 degrees—not approaching, but at 212 degrees; that is, they were brought to a boil, and kept boiling for two full hours. If there is no mistake about this, is it safe to advise less than something more than two hours? [The only question in my mind is whether these scientists did not make a mistake; and ought their single scientific experiment to overbalance the results of practical experience for years?—Ed.]—Gleanings.

Winter Apiarian Work.—When bees are settled in winter quarters, the next thing to do is to prepare for the coming honey harvest. Repair and clean unoccupied hives, make needed new hives, put foundation in brood-frames (don't worry about its getting old; it is just as good if prepared years before needed), and get all surplus arrangements ready. Such is the advice of G. M. Doolittle, in the American Bee-Keeper. He thinks best to count on 150 pounds of comb or 250 extracted for each colony. Less than this finds him left behind about one year in five. Have bait sections in section supers. Then study over what is to be done the next year, read over again the bee-papers, and write to them some of the new things you have learned in your own experience.

Disadvantages of Large Hives.—C. P. Dadant has in a series of articles in Gleanings been giving the arguments in favor of large hives in such strong manner as perhaps no other could do, and having given their good points, he now gives their disadvantages in a manner that is remarkable for its fairness. The large hive costs nearly twice as much as an 8-frame dovetailed. It is not suitable for comb honey unless under special management, for honey will go in the brood-combs that ought to go in the supers, especially in a bad season. It is bulky as well as heavy, needing two men to move it in the apiary, and it is twice as much work to cellar as the smaller hive. The worst thing is transportation. A wagon that will take 28 small hives will take only 12 large ones. Freight on the railroad is twice as much as for the small hives. But in view of the fact that the Dadants do very little moving of hives, the better wintering in the large hives, the less danger of spring dwindling, and the greater scope for a prolific queen, they feel warranted in continuing the use of large hives.

Sectional Hives are a bone of contention between Messrs. Aikin and Doolittle in the Progressive Bee-Keeper. Mr. Aikin makes this pleasant picture of a hive composed of sections 15 inches square and 5 inches deep: "Friends, just look at it. With these sectional hives the apiarist can make increase or not as he pleases, can make any and all colonies work in supers, can cause all (nearly) of the honey to go into supers, can at any time make the size of the hive conform to the needs of the case, whether increase or honey is wanted. You can contract and squeeze white honey to the surplus, and then enlarge and get the dark for winter stores."

Then Mr. Doolittle replies: "I wish to ask him and the readers if they think it will pay to have our bees brooding sticks and empty space, during the spring, instead of queen's eggs, larva and pupa bees? Just sit down and figure how much of that kind of a thing must be done when two sections of his wonderful (?) hive are placed together for a brood-chamber. Do you see that row of bottom-bars clear across the hive? Then all that vacant space between them and the top-bars, necessary for a bee-space? Next, all of those top-bars? Thousands of bees could be reared were this *comb* with the same economy of heat, etc."

Root's Column

LOOK OUT

FOR

THIS SPACE

NEXT TIME.

WE SHALL

HAVE

SOMETHING

INTERESTING

TO SHOW

YOU.

The A. I. Root Company

MEDINA, OHIO.

GENERAL ITEMS

Getting Sections Well Filled.

On page 795 (1898) is a letter about getting all sections well filled. I would like to ask Mr. Harding how he would operate if he were here in Utah. At a suitable place a bee-master can produce from a strong colony, by not letting the bees swarm, from five to nine cases of comb honey in one season, 28 one-pound sections in a case. Where we have here to take comb honey off about every 10 or 12 days, I would like to have Mr. Harding tell through the American Bee Journal how he would manage in a good season, to keep the comb honey from travel-stain. I have been a subscriber to the American Bee Journal since I kept bees in Missouri, years ago, and also when I was in Texas. I have been here four years. I do not see how any one in the bee-business can do without the American Bee Journal, if he wants to be successful. FRIEDRICH SCHACH.

Salt Lake Co., Utah, Dec. 20.

Good Rain in San Diego Co., Calif.

In this portion of California bee-keepers have had but little to do the past summer in the apiary, except to feed the bees and try to preserve the combs of those that starved out. We had a good rain over most of San Diego county Dec. 16, which revived the hopes of the bee-men, as well as the orange and lemon growers, for many orchards were suffering for irrigation, and no water in the reservoirs for the purpose. All now feel encouraged. Grain is being sown at a great rate, and with continued favors we will be "right side up" the coming season. F. C. WIGGINS.

San Diego Co., Calif., Dec. 20.

Poor Year for Bees.

I am well pleased with the American Bee Journal, and think every one who keeps bees should have it. This has been a very poor year for bees in this portion of Texas. The season started out promisingly, the early flowers in full bloom, and hives full of brood; but about the last of March a blizzard came and killed all the brood and flowers. A great many bees died for want of food, and but few swarms issued in consequence in a large section of country. However, where the hives were not robbed too close, there is enough left for wintering; and if we can get an early and mild spring, bees will do well next year.

McLennan Co., Tex. A. A. PERRY.

A Turkey Dollar—Puns, Etc.

The year is drawing to a close. Another Christmas is near, following quick on the heels of the last. Again I find myself in arrears for the American Bee Journal, and again the dollar allotted for holiday enjoyment must go to Editor York to enable him to dine at Christmas on his annual favorite repast of roast turkey. I don't complain nor envy in the least. Tho I should dine on savory stuft owl, the thought would be compensating, that tho the Editor was regaling on tempting, toothsome, tender turkey, he has each week furnisht me with a mental repast far better than any holiday's feasting could be. But I have concluded not to have the Editor draw on me next year for his Christmas feast, so I will play him a little trick, send him two dollars, then he will have to look to some other delinquent subscriber, if he has any, for his turkey dollar.

The American Bee Journal is a good vehicle of information in regard to the changing seasons in various parts of the country, through the reports of bee-keepers which show that no two seasons are exactly alike

SEED DUE BILL FREE

To get new customers to test my seeds I will mail my handsome **catalogue for 1899**, lithographed and beautifully illustrated, and a **10c. Due Bill**, good for 10c. worth of seeds for trial, **absolutely free**. It is full of bargains. All the **Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc.**, at lowest prices. **Ten Great Novelties** offered without names. I will pay **$50. FOR A NAME** for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. **You will be surprised** at my bargain offers. Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy.

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We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.75 per gross; 5 gross, $3.50 per gross. Address,

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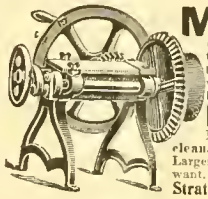

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Made with or without gear. Cut **clean, fine** and **easy.** Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

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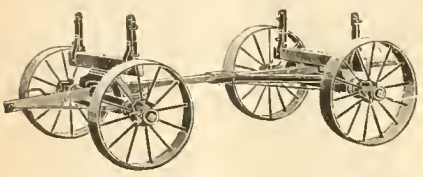

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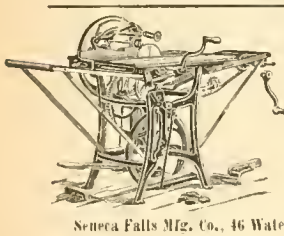

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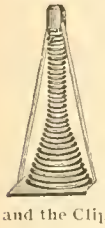
Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N. Y.



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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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M. H. HUNT, BELL BRANCH, MICH.

in the same locality. Probably this immense section of country was never surpast in honey-producing and bee-increasing during the months of May and June in the same months of any previous year. But since then we have had drouth and dearth, so the bees have a long autumn and winter rest.

Sometime since some one (I have forgotten who) alluded to, as being displeasing to him, Editor York's "horrible puns!" "Horrible?" I thought they were pithy, pointed, pleasing, the spice of composition, and would like the Editor to cultivate his punning faculty. Can our friend, that thinks puns horrible, put words together in a more pleasing style than the following pat, pithy, pointed, pleasing pun attributed to "Bill Nye?" One day, when seated at a hotel table with other guests, the sable waiter approacht bearing a turkey on a plate which he accidentally dropt on the floor. Then said Nye:

"Gentlemen, we here see the downfall of Turkey, the upsetting of Greece, the destruction of China, and the humiliation of Africa." J. L. SEXTON.

Sheboygan Co., Wis., Dec. 21.

Got No Surplus Honey.

I have 11 colonies of bees packt for winter on the summer stands. My bees did no good this year. I did not get any surplus honey, and had to feed some colonies, yet this has not discouraged me in the least, for I hope to come out successfully in the end.

I could not think of trying to keep bees without the American Bee Journal. It is a welcome visitor every week.

J. P. PIPKIN.

Bollinger Co., Mo., Dec. 21.

Prospects in Southern California.

As to the prospects of the bee-industry in Southern California, up to this date I never saw it so discouraging. We have had scarcely enough rain so far to lay the dust, and it is now almost January. At this time of year usually the hills and valleys are covered with green, but now nothing but a parcht and barren waste is presented to the eye. Unless rain soon comes I don't see how bee-men can hope for much of a return for 1899. A. ROZELL.

Los Angeles Co., Calif., Dec. 21.

Has Kept Bees Five Years.

There are many bee-keepers in this part of the State who keep from one to 40 colonies, and are all depending on what they knew 50 years ago in the management of their bees, unless they can steal it from me by borrowing my American Bee Journal and never returning it.

I sterted in the bee-business five years ago, with two colonies; I now have 80 in fine condition. I winter them on the summer stands, with Hill's device and chaff cushions. My winter losses have not been over 5 percent. I credit my success to "A B C of Bee-Culture," "Langstroth Revised," and the American Bee Journal, which I could not well do without.

WM. C. HUDNALL.

Fulton Co., Ill., Dec. 23.

Recipes Using Honey.

HONEY APPLE CREAM PIE.—Line a pie-plate with pie-crust, then pare and core the apples, lay them one piece at a time till the plate is covered, and sprinkle over with flour; then ½ cup of honey and ½ cup of sweet cream; also sprinkle a little cinnamon on, and bake till the apples are done. This is good.

HONEY APPLE SHORT-CAKE.—Pare and core two quarts of apples, boil till half done, then add one cup of extracted honey, and cook till done, then put on short-cake when warm. To be eaten warm. For dough for short-cake, take 1 cup of sour-milk, ½ cup of good cream, pinch of salt,

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Wholesale and Retail.

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INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,

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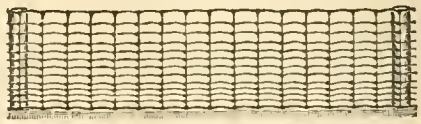

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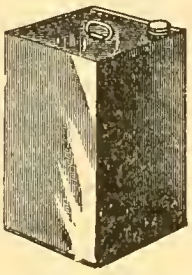
ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

We Want Every bee-keeper to have a copy of our..... 1899 Catalog.

Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS COMPANY,

SPECIAL AGENT FOR THE SOUTHWEST, Watertown, Wis.

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Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each,	by mail, $1.50
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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WE HAVE NO AGENTS, DEALERS OR MIDDLEMEN.

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This Elegant Team and Farm Harness for $19.50

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ELKHART CARRIAGE & HARNESS MFG. CO. W. B. PRATT, Sec'y, **ELKHART, INDIANA.**

Please mention the Bee Journal when writing Advertisers.

teaspoonful of saleratus, and bake in two layers, then spread the above apple sauce between the layers, and on top of the last layer. To be eaten with sweet cream and honey.

HONEY-CAKE.—One cup of honey, 1 cup of cream, ½ teaspoonful of saleratus, 1 egg, ½ teaspoonful of ginger, pinch of salt; flour.

At present we have 50 colonies of bees on the summer stands, all in chaff hives, and all alive to date. We had 22 young swarms last summer, and 28 old colonies. For this poor season we got 400 pounds of honey from 25 colonies, and the others we think have enough to winter on, or very nearly. We run for comb honey. We have had two weeks of very deep snow, tho not very cold, but now it is thawing.

MR. & MRS. IRA C. MATTESON.

Wyoming Co., N. Y., Dec. 21.

An Opinion of Bee Co., Tex.

I believe this is the poorest country (Southwestern Texas) on earth. Too dry; and there is a bug, moth or weevil for everything that grows or lives. Bee-moths are as thick as mosquitoes in the Kankakee swamps. If a bee turns his back at the entrance, in goes a swarm of moths.

Another thing, it costs more to get the honey to market in small quantities than it is worth. If one sells it to a certain firm in this county, he might as well get a tin bill and pick dirt with the chickens.

Bee Co., Tex., Dec. 21. O. H. STEVENS.

Past Season's Report.

Altho I have been in the bee-business only about three years, I feel that I can't get along without the Bee Journal. I had nine colonies, spring count, in 1898, and am wintering 20 colonies. The increase was all by natural swarming. I ran for comb honey, and got about 400 pounds, mostly all from fall flowers.

GEORGE E KILMER.

Cayuga Co., N. Y., Dec. 20.

Report for Two Seasons.

I started in the spring of 1897 with two colonies of bees, and got 90 pounds of comb honey from the two old colonies, and five swarms; so I had seven colonies to put into winter quarters. They came out all right the next spring, and from the seven I got 527 pounds of comb honey, and 16 swarms. I have put into winter quarters 21 colonies, and up to date they are doing finely. The temperature stands at 40 degrees, and has not changed a degree since putting them away. I put them into the cellar Nov. 19.

I am highly pleased with the American Bee Journal, and I attribute my success to it. FRANK E. KNAPT.

Wadena Co., Minn., Dec. 24.

Bees Did Very Poorly.

My bees did very poorly this year. I had 30 colonies, spring count, and got about 125 pounds of honey in all. I have now 33 colonies in fair condition—21 in the cellar and 12 on the summer stands packt in sawdust. But I don't have to depend on bees alone; I have a farm, and have plenty of work. Bees are only a side work with me. There was lots of white clover and Alsike, but it did not furnish any honey to amount to anything the past season. LOUIS THIEL.

Huron Co., Mich., Dec. 26.

A Report for 1898.

My report for 1898 is about 500 pounds of comb and about 300 of extracted honey, from about 250 colonies, spring count, and they are in poor condition for winter. Some probably will starve before spring comes.

I want to tell Dr. Miller that I can hold him level on putting bees into the cellar. I commenced at 9 a.m. and quit at 5 p.m., and put in 234 colonies, all myself, in that

To Our Regular Subscribers—Now for New Readers!

3 Great 40-cent Offers—Each One Free!!

Below are THREE splendid Premium Offers, and we will mail your choice of any one of them for sending us $1.00 for JUST ONE NEW SUBSCRIBER for 1899.

Or, for sending us TWO NEW SUBSCRIBERS, as above, we will mail the sender all of the three great 40-cent offers.

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Offer No. 1.—Samantha at Saratoga.

100,000 Sold at $2.50 per copy.

This is indeed a feast of fun, by the only peer of Mark Twain's humor—JOSIAH ALLEN'S WIFE (Marietta Holley.)

Read this Extract from the Book:

And right here, let me insert this one word of wisdom for the special comfort of my sect, and yet it is one that may well be laid to heart by the more opposite one. If your pardner gets restless and oneasy and middlin' cross, as pard-

ners will be anon or even oftener—start them off on a tower. A tower will in 9 cases out of 10 lift 'em out of their oneasiness, their restlessness and their crossness.

Why I have known a short tower to Slab City or Loontown act like a charm on my pardner, when crossness wuz in his mean and snappishness wuz present with him. I have known him to set off with the mean of a lion and come back with the liniment of a lamb.

And jest the prospect of a tower ahead is a great help to a woman in rulin' and keepin' a pardner straight. Somehow jest the thought of a tower sort of lifts him up in mind, and happifys him, and makes him easier to quell, and pardners must be quelled at times, else there would be no livin' with 'em.

She takes off FOLLIES, FLIRTATIONS, LOW-NECKED DRESSING, DUDES, PUG DOGS, TOBOGGANING, ETC.

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Illustrator No. 3.—Poultry Diseases, Lice, Grapes, Moulting, Egg Eating, etc., 25 cents.

Illustrator No. 4.—Judging Fowls, Description of Breeds, Mating, etc., 25 cents.

Address **GEORGE W. YORK & CO., 118 Michigan St., CHICAGO, ILL.**

time, and brought them eight to ten rods. Now if anybody has beat this time I would like to know it.

I am like the Doctor—whistling up my courage for next year, as I have plenty of empty sections left over from this year.

N. STAININGER.

Cedar Co., Iowa, Nov. 30.

Entirely Satisfied.

I do not believe in filling a letter with fulsome praise, but I will simply say that I am entirely satisfied with the American Bee Journal, and expect to continue taking it as long as I keep bees. S. H. HERRICK.

Winnebago Co., Ill., Dec. 22.

Rather Poor Season for Honey.

My bees did rather poor business this season. I had 62 colonies, spring count, and got only 300 pounds of comb and extracted honey, which was of fair quality. I paid out $30 for hives and fixtures last spring, and I sold only $22 worth of honey this fall, after reserving a good supply for our flapjacks this winter.

All colonies seemed to have plenty of honey in October, when I examined them, but when I came to put them in their winter quarters, Nov. 22, I found they had shrunk considerably, and I fear that some of them will not pull through the winter.

Of course, I can't do without the Bee Journal as long as I keep bees, honey or no honey. C. S. FRENCH.

Todd Co., Minn., Dec. 22.

Spraying Fruit-Trees, Etc.

Like unto other bee-papers that I have perused, the American Bee Journal is good. The Omaha convention notes are particularly interesting; all the addresses made by some of the most eminent bee-keepers of the country have been read and duly considered, more particularly "General Advice to Bee-Keepers," by Mr. Abbott. I was interested in the various discussions, particularly on the hives and sizes of sections. I have notions of my own, yet largely culled from some one else's, but for me to change 4¼ open-all-around sections, and the appliances to agree thereto—I could not afford such alterations for the short honey-flows we have here, and still more particularly when fruit-producers lack good judgment in spraying their trees while in full bloom, thereby destroying thousands of my bees as was the case last season.

It is true that last season's honey-flow was almost a failure here, but the killing off of so many bees dwindled the colonies to such a degree that what little nectar there was could not be collected by them. I hardly know what course to pursue the coming spring to keep the strength of my colonies in fruit-blooming time, unless Mr. Secor might make a few suggestions.

My apiary is reduced from 32 colonies to 22, by doubling the weaker ones and fall feeding them. They are in excellent con

THE BEGINNING and all that lies between that and the end of the poultry business, from the hatching of the chick until it reaches the market; the best methods of **hatching, brooding, feeding and marketing** of eggs and poultry. That is what is **THE MIDDLE BOOK ON POULTRY.** It contains 228 pages chuck full of the things poultry people should know. **Cuts of all the leading breeds, Incubators, Brooders and a full line of poultry supplies.** It will help you out of many of the little troubles that arise in breeding poultry. Sent for **10c.** in stamps. **THE END**

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OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

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dition for the winter, protected from the cold west, north and northeast winds, the hives all facing the east.

The Bee Journal will be watcht with eagerness as to instructions when to spray fruit trees. M. N. SIMON.

Wood Co., Ohio, Dec. 23.

Report for 1898.

My apiary consists of 38 colonies, and I didn't get any honey. White clover was a failure; basswood was of short bloom, lasting only three or four days. I fed one barrel of sugar in September to help winter the bees. Mine are hybrids and Italians, and a few of the Adels. They were very strong and able for duty, if there had been anything for them to do.

SILAS JOHNSON.

Marshall Co., W. Va., Dec. 21.

Another Year of Failure.

Another year has come and gone, and with it another year of failure. But such is life. I still have hopes of something better for 1899.

I began last spring with 70 colonies in fine condition. The spring was all that could be desired, and the bees built up rapidly, owing to the fact that they had an abundance of stores of the previous season's gathering, for they got but very little from the early bloom. Fruit-bloom was quite abundant, but no honey. Fourteen swarms issued during May, and that ended swarming. These were all hived back with the parent colony, so I had no increase. White clover came on early in June, but it was so perfectly destitute of honey that bees paid no attention to it, working instead on honey-dew, getting just barely enough of this miserable stuff to keep up natural wear and tear of the colony.

This thing went on until September, when we got nearly enough from golden-rod and other fall flowers to put the bees in fairly good condition for winter, tho I expect to have to feed quite heavily in the spring.

I have 49 colonies in the cellar, and 17 on the summer stands in chaff hives. Those in the cellar seem to be wintering nicely, while those out-doors seem to be dying off fast. Probably the late cold snap was pretty severe on them.

I am going to try the Golden method of producing comb honey on a few colonies next spring, providing we get a paying honey-flow. L. G. REED.

Portage Co., Ohio, Dec. 24.

Death of an Interested Worker.

Sept. 10, 1898, at the age of 24 years, your appreciative reader, my afflicted son, N. F. Murphy, past from this life. He was much interested in bees, and during his work in that way was quite successful, owing, doubtless, to the information gathered from the American Bee Journal.

M. P. MURPHY, SR.

Maury Co., Tenn., Dec. 23.

Honey from Sweet Clover.

My report for 1898 is 1,000 pounds of honey from 20 colonies, spring count. I think I get all of my surplus from sweet clover. It grew from 3 to 7½ feet high. My neighbors got no surplus. They had no clover. A. D. LORD.

Lyon Co., Minn., Dec. 24.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & Co.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

BOSTON, Jan. 9.—Fancy white, 13@14c; A No. 1, 12c; No. 1, 11c; light amber, 9@10c; buckwheat, no call. Extracted, white Northern stock, 7@8c; Southern stock, 6@7c. Beeswax, 27c.

The demand for honey seems to have dropt out of sight during the holiday season, but now that is over we hope to see a better call for it. There is abundance of stock on hand and it now looks as if the expected shortage would not materialize. BLAKE, SCOTT & LEE.

BUFFALO, Jan. 6.—Our honey market is very quiet. Finest 1-pound white fancy combs move slow at 12c—often 11c; excellent grades, 9@10c, and dark, poor, etc., 6@8c. Extracted, 5@6c. Beeswax, fancy pure, 28@30c; dark, etc., 24@26.

BATTERSON & Co.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

A. V. BISHOP & Co.

Convention Notice.

Wisconsin. The 15th annual meeting of the Wisconsin State Bee-Keepers' Association will be held Feb. 9 and 10, 1899, in Madison. Many experienced bee-keepers will be there. The following is a part of the program:

"What to do with Unfinisht Sections"—John Trimberger, of Clark Co.

"Working an Apiary for Comb Honey without Increase"—H. Lathrop, of Green Co.

"Short Cuts in Extracting Honey"—Frank Minnick, of Sauk Co.

"Handling and Shipping Extracted Honey"—G. W. Wilson, of Vernon Co.

"Selling Honey"—Gustav Gross, of Jefferson Co.

"Selling Comb Foundation"—Aug. Weiss, of Outagamie Co.

"Advantage of Honey Exhibits"—Ed Ochsner, of Sauk Co.

"Cellar Wintering"—A. G. Wilson, of Vernon Co.

"Benefits in Attending Convention"—J. Hoffman, of Green Co.

"State Foul Brood Report"—N. E. France, of Grant Co.

"Future Prospects of Wisconsin Bee-Keeping"—F. Wilcox, of Juneau Co.

As many other State Societies will be in session the same week in Madison, there will be excursion rates to all who take receipts of their railroad tickets. F. WILCOX, Pres.

N. E. FRANCE, Sec., Platteville, Wis.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

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Being the cleanest is usually workt the quickest of any foundation made.

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Sprout Brook, Montgomery Co., N. Y.

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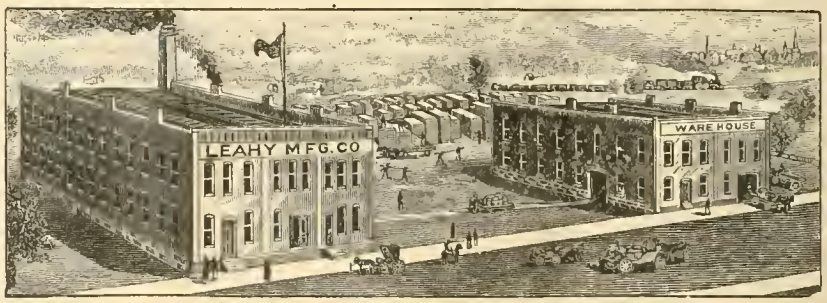

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26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., FEBRUARY 2, 1899. No. 5.

CONTRIBUTED ARTICLES

No. 3.—The "Golden" Method of Producing Comb Honey Described.

BY J. A. GOLDEN.

[Continued from page 34.]

HAVING in my last article described a new hive and how constructed, I now take pleasure in presenting a remodeled description with an illustration of a remodeled hive, showing the top of the hive and bottom of the super.

Now, if you look at the picture, you will notice a strip has been cut from each top side-body. Take a guage and mark ¼ inch from the top edge of the side-body, and saw down at each end ¼ inch, then with a draw-knife shave the ¼ space off, and tack the ⅜ corner strips on the outside ends of the side-body in place of the inside, as in the new hive; then tack the thin boards on the outside, letting the board be even with the side-body at the bottom, and extend as high as the end-board, or as high as the side-board was before you cut the ¼ inch off. Thus you see a ¼-inch bee-space is created over the top of the brood-frames, and the ⅜ space on the outside of the hive proper.

The supers are remodeled the same way, cutting a strip from the top of the super and letting the outside board extend ¼ inch, or as high as the side-body before cutting off the ¼ inch.

Thus it is a small task to change a hive as made by any factory to the Golden method, and any one desiring can test the Golden method properly.

The super bottom here illustrates the tin or sheet-iron apron that the section slats and separators rest on, and how put on, as previously noted. It also shows the side passage-ways, and clincht end-strips previously mentioned, making the ¼-inch bee-space over the frames and sections when placed on.

Having given a full, plain and complete explanation, accompanied by engravings, of my hive both new and remodeled, and how constructed, in my next I will give a full explanation of my method of manipulation, so that there need be no mistakes by those who may feel disposed to test the Golden method in 1899; and if found wanting in a single feature I represent, discard the method; but if found profitable, follow it and be happy. But before doing so I trust all who can do so will procure a perfect model hive by which to test the method, that no mistakes be made, either in hive or manipulation, from the fact that a combination cannot be explained on paper like seeing the thing itself.

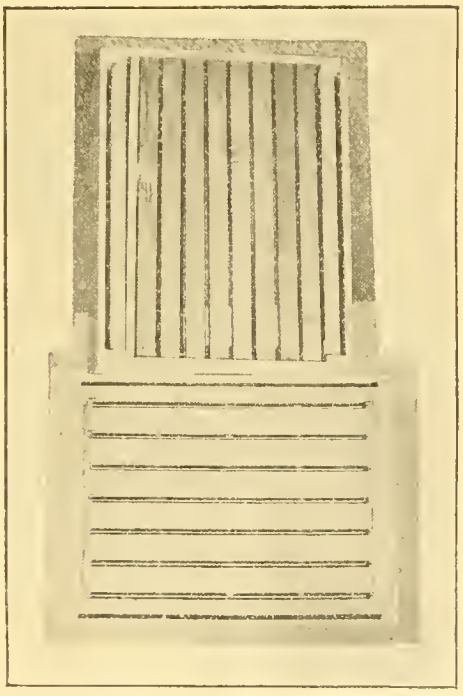
The great problem that has occupied the minds of the bee-keepers of all ages has been, is, and ever will be, how, or by what method, should we as bee-keepers pursue to increase the production of comb honey, and at the same time curtail expenses.

Mr. Benton—one of our best authors on bees and bee-keeping—said in his work on "The Honey-Bee," Chapter VIII, page 75:

"To secure a yield of surplus honey, the part remaining to be done if all goes well, is merely to put the surplus receptacles in place, admit the bees," etc.

Farther on in the article he again says: "But if swarming complications arise, the whole of the bee-keeper's skill and ingenuity may again be called into requisition to keep the forces together, and storing in surplus receptacles."

Thus the skill lies in having the colonies ready for whatever may come, and a force sufficient to store the whole season's surplus in a few days. My practical work for the past four years with the Golden method here given proves Mr. Benton's words to be undisputable facts; yet we as bee-keepers want a system that will not only secure a large percent of surplus over former methods, but a system that will curtail expenses, time, and labor, as well.



Top of Hive and Bottom of Super.

These are factors that have caused many of our bee-keepers sleepless nights, meditating and formulating plans which, when put into practice, took the wings of the morn-

ing and were found wanting, notwithstanding wonderful progress has been achieved in the foregoing direction, and to this end the method herein described has in all of my experience doubled the amount of surplus per colony over any other method I have practiced, except in isolated cases, while the expense, time and labor were lessened one-half, and often more than one-half. As I have written hundreds of pages explaining my method to bee-keepers the past three years, in the next article I will again give the formula freely. Morgan Co., Ohio.

[To be continued.]

Cellar-Wintering of Bees—Hints to Beginners.

BY E. S. MILES.

PERHAPS a little of my experience will be of use to "Wisconsin" (see page 758, 1898). I have wintered bees with bottoms on the hives the same as they were in summer, and also with bottoms off. I very much prefer the latter way, for, as Dr. Miller says, it requires too much attention to keep the entrance clear of dead bees when they have only the usual summer entrance. The Doctor's way may be the best of all, but if one does not have his kind of bottom-boards they must do the best they can under the circumstances.

I always take off the bottoms before carrying into the cellar, as I find that, no difference how carefully you handle bees in carrying in, the going from the cold atmosphere outside to the comparatively warm air of the cellar, always rouses the colonies more or less, and when you lift off from the bottom you will lose a good many bees.

While going into the warm air of the cellar with bottoms off will rouse the colony the same, there is nothing for them to crawl onto, and as they are all ready to be quickly set in place, the disturbance is soon over and they settle down.

I like to have the cellar pretty dark, just so I can see to set the hives in place, and for this reason I seldom work at putting them in in the middle of the day.

While this article is too late to be of any use this winter, I think it will pay any beginner to save it till next fall, as it will save him considerable time to know just how to proceed to get the bees in the cellar in the best condition to stand the long confinement.

With the common loose bottom, if the hives are within three or four rods of the cellar, I pry them loose from the bottom-board a day or two before cellaring, so they will be perfectly quiet and undisturbed when I go to carry them into the cellar. The distance to raise them from the bottom-board depends on the strength of the colony. If not very strong, like mine were last fall, one only has to raise them enough to slip a nail under each corner; but if real strong, and the combs nearly full of honey, you may have to raise them a half inch or more. If there is a cold wind blowing the bees will the more quickly draw up among the combs and off of the bottom-board.

In extreme cases, as an extra-strong and cross colony, I carry the hive carefully and set it facing north, near the door, the evening before I wish to put it in. They pry it loose from the bottom, and after an hour or two, when they have quieted down again, I raise them some more at the front end so as to get them all off the bottom.

On a still night, with the temperature at zero, I have had hives raised ¼ to ½ inch from the bottom, and still have the cluster touch the bottom-board. In such cases I carefully pick up the hive and carry it into the cellar. The loss of a couple dozen bees from such a colony is no damage.

Right here I would like to say that these extra-strong colonies, when wintered in the cellar, seldom are the best when they come out, as they are largely old bees, and die off fast through the winter. I prefer a moderate colony with young queen and plenty of honey for cellar-wintering, every time.

If the hives are more than three or four rods from the cellar, I carry them the same as I do the extra-strong ones, on a cold afternoon, and have them all ready to take in early in the morning. Sometimes I carry in some in the evening if it is moonlight. Have the cellar prepared before hand, by taking an empty hive or super, and level it on four bricks. Fix as many of these as you need, side by side, as close together as necessity requires, then begin at the far corner of your cellar, set in a hive of bees, then take a couple sticks about 2 inches square and as long as the hive is wide, and lay one on top of the hive just set in, at each end, for the next hive to set on. Pile up this way till the pile is as high as you want it, then begin on the next one.

If I had only four or five hives I would pile them in one pile, as I think they are better off up from the floor.

The advantages of this way of piling, over the way commonly recommended, is that it is easier to fix the stands, and if you happen to make a jar, as you will sometimes, you only jar the pile of hives you are working on, while the other way you jar the whole lot of hives.

Hives arranged as above in a cellar of the proper temperature will need little or no attention through the winter, and the combs and bees will stay perfectly dry and clean.

To take out in the spring, take a bottom-board, lay it on a box or on the cellar floor, set a hive on it, and they are ready to go out.

Tight-bottom hives need top ventilation in the cellar.

If for any reason I wish to leave the bottom on a hive, I put a quilt of muslin over the frames while it is yet warm weather, then when I get them into the cellar I carefully remove the cover and pile in the cellar the same as those with bottoms off.

All work putting bees in the cellar should be done with the greatest care to avoid jars or shaking of the frames. Always carry a hive endwise of the frames, that is, if a Langstroth hive, the entrance should be in front as you carry it. Crawford Co., Iowa.

Wintering Bees in the Cellar.

BY S. T. PETTIT.

ON page 602 (1898) may be found the following:

"To prevent mold in hives, the editor of Revue Internationale says a plan that has proved satisfactory to all who have tried it, is to have an opening at the back as well as front under the hive, allowing the air to pass through. In this country the same object is attained by those who cellar their bees, by having a front entrance two inches deep, or by removing the floor entirely."

I wish to say, if the writer, by the term "this country," means to include Canada, that he is laboring under quite a big mistake. Since the winter 1886-87 I have practiced and advocated providing air-passages through under the hives by placing ⅜-inch blocks under the rear ends of the hives. I also elevate the rear end of each about two inches higher than the front end. There is great gain in having the air to pass automatically through under the hive from front to rear. The difference in temperature between hive air and cellar air causes the air to pass so gently and surely through and around the bees and out at the highest opening that the effect is all that can be desired. A good many in Canada are adopting this plan, and those who do not will, so I think, continue to suffer more or less, and you will hear of them using arts of one kind or other to coax their bees upstairs in the comb honey supers.

In the light of my own experience and observation I see it as follows: A hive that depends only upon a large entrance for ventilation has only what is gained by the diffusion, assisted by the efforts of the bees. Now, I presume we all know that cellar air in a cellar filled with bees is a good way off from being pure, and consequently the hive air has only foul cellar air to purify it. Well, it follows that the diffusion will be sluggish, and the cleansing very imperfect; and the bees, feeling the consequent depression, will, in order to effect a change of air, use their wings, and a disquietude and murmuring will tell the attentive bee-keeper that all is not well. But very likely the colonies will pull through, but they cannot be in just the same vigorous condition that they would be if they had been, during the winter, in a perfectly comfortable condition, not feeling the necessity of moving a wing.

It is a good thing at this time of year to examine and study our bees and bee-cellars, and our methods, and take another step forward in our profession. One thing is certain, and that is this, if our bees are noisy there is room for improvement.

I will add that in my cellar the hives set one upon another to the top of the cellar, with a chaff cushion between them, so that the floor of each hive above another is kept warm through the cushion by the heat of the one upon which it sits. In most of the hives the bees lie upon their own warm floor, kept warm by the heat of the bees below them, and, I tell you, it gives me a good deal of pleasure to go through my bee-cellar two or three times a week, candle in hand, and see the dear little "hum-bugs" sleeping—resting so comfortably and free from care. I have no anxiety about their safe wintering. With pleasing anticipations I

see the hives booming with bright, healthy bees when springtime shall come again.

"Spring dwindling," "building up bees in spring," "swarming out," "half-comb honey supers," "bait combs," and other devices to coax the bees upstairs, are phrases strongly suggesting defective wintering.

I have experimented in the line of wintering without floors, and the result has not been favorable in my hands.

There is a great deal of imperfect wintering in Canada, and the worst feature is that so many are satisfied.

Ontario, Canada, Jan. 21.

Those Double Brood-Chamber Colonies.

BY FRANK COVERDALE.

THE "double-deckers" referred to on page 805 (1898) proved to be a very interesting study for me during the entire season of 1898. One very prominent feature that cropt out was their determination not to stay in a single-story after being hived. Only one out of the lot could be induced to stay, the persistent ones had to be "scattered among all nations." I guess they thought eight Langstroth frames entirely too small quarters. The one that did go to work did very well. I never had a reasonable amount of success in hiving swarms on eight frames that had emerged from anything larger, so you see I could not apply the contraction plan at swarming-time.

Why did they swarm so? I can't tell, but I think I might make somewhat of a liberal guess, after watching them and their work. Perhaps the surplus of honey all around the brood-nest had something to do with it. The reason I formed this opinion is because when both stories were chock-full, queen-cells were started at once almost invariably, and very little work in any case was done above. Strong 8-frame colonies right by their side completed two cases of sections, and didn't swarm at all. This strengthens and bears me out on what I have of late years begun to believe, that the more honey stored in and around the brood the greater the liability to swarm.

A colony in a brood-chamber filled solid with brood from the bottom and very close to the top-bars will usually do considerable work in sections before swarming, and with a far less liability to swarm at all.

Right here let me say that an apiary all supplied with good, young, prolific queens will do nearly all to bring about the above solid brood-chamber in time, and to a very great extent lessen the chances of swarming and increase the surplus.

For years I used 10 and 8 frame hives side by side, and the former swarmed fully as much. I am fast coming to the conclusion that it is not so much in the size of the brood-chamber as how completely it is filled with brood before the opening of the harvest. Get such a colony started early above, and keep an empty case directly above the brood, and those more complete above it, and so on until the season begins to draw to a close. Fully 50 percent of such colonies, and treated as above, whether on 8, 10, or on 16 frames will not swarm at all, and these last are the ones that just stack up the honey-cases. I have had them standing from three to six cases high with but a few capt on top, but later on nearly all finisht.

Suppose a super is placed on a colony like the latter, and the bees allowed to fill it, wouldn't that be somewhat after the fashion of a double-decker filled with brood and honey? and the swarming-fever will be just as sure as with a double-deck that contains a like amount of honey.

As my experience is so limited I think I will let those of further knowledge next occupy the stand.

Before long I will tell just how I safely introduced 50 Southern queens without the loss of one.

Jackson Co., Iowa.

COMB VS. EXTRACTED HONEY.

A Proposed Experiment to Show Comparative Yields.

BY R. C. AIKIN.

IN this article I am to detail plans for experiments, the purpose of the experiments to prove or disprove present accepted theories. I shall first consider that of comb honey vs. extracted.

Take a number of colonies, which number may be greater or less as the apiarist may be prepared to use in the experiment, and divide the lot into two equal parts. The dividing should be very carefully done, and may be accomplisht in various ways. I cannot recommend the use of less than 8 or 10 colonies in this experiment. The fewer colonies used the greater by far is it necessary to be *very careful in details*. Even with far more care in the work a small number of colonies used will be far less conclusive than a large number.

Select these colonies long before the flow. It is necessary to have them as nearly equal as possible, and to do this we must be intimate with every colony in its career from early spring till the experiment is concluded. Suppose the flow or harvest is to come in June, make the selection of colonies not later than April. See how nearly each is like all the rest in stores, amount of brood and bees, and in age and general characteristics of queens. I feel confident that very frequently the age of the queen has a great influence upon the colony. I should want the queens of about the same age.

Beginning say about the first of April, make and continually keep a close record of each colony. Have this record state the strength of each colony in both bees and brood. Estimate the number of combs the bees can nicely cover, and the number of combs of brood. Do not fall into the error of recording four combs of brood simply because there is brood in four, but each not over half filled. Estimate the brood as to how many *full combs* it *equals*, and *not* the number of combs containing brood. Apply the same method to the amount of bees and honey. In estimating honey, if a comb should be extra thick and have probably twice the weight of an average one, make your record show the number of combs average. Any practical apiarist knows at a glance about what is an average full comb.

In my regular manipulations through the spring I follow these rules in recording, and the entry is usually made on a scrap of section in the top of the hive—my hives are so constructed that I can so keep the record-board. I have also practiced using book-entries, keeping the hive number in the book. These entries are always in abbreviation. I have a settled rule as to the order of the entry, here is the order: Month, day of month, amount of bees, amount of brood, and amount of honey. Having this as the order *always*, a system of figures serves the purpose as well as a great lot of words.

On April first I probably examine a colony. My record would read something like this: 4-1, 3-2-4. This means bees to cover normally 3 combs, 2 full combs of brood (this brood may be in 3 or 4 combs), and the equivalent to 4 combs of honey. If I clip the queen I mark in addition, "cpd," or for swarming, "smd," etc.

I do not think this all unimportant. It is *very* important that you *know* the condition of every colony in the experiment, else you draw false conclusions, get erroneous ideas, and promulgate false theories. Any apiarist who will bring himself to the details of an experiment like this, will be well repaid in becoming more thorough and expert in his apicultural work.

During the building-up process prior to the harvest, much will depend upon the management of the experiment colonies. I said the queens should be very like in age and general characteristics. The reason for this is that queens of varying ages—especially if some be very young and one aged—the old queen may fail in the midst of the experiment when too late to remedy the trouble, and such a thing would very seriously affect the accuracy of the result. Do not have a failing queen in the experiment.

Having started with colonies well nigh alike, try to keep them equal all the time. Many and many a queen just as good every way as her rivals in the apiary, falls behind because of environments. Previous manipulation or circumstances may have hampered her so that she had less bees to winter, and so would necessarily have a weaker colony to sustain her in the spring and be one to three weeks behind in breeding up through the spring. To avoid this trouble, or rather to remedy it, when one colony seems not able to keep up with the rest, take from the strongest bees and brood to help the weaker, preferably taking *bees* rather than brood. The reason for taking bees is, the queen that is getting behind may not have bees enough to care for brood as fast as she would lay. A very common reason why queens lay sparingly in spring is because there are not bees sufficient to care for the brood. Try to judge of a queen whether she lacks natural vigor or simply needs more workers, and if the latter, give workers; but if the former, give both brood and workers, thus adding vigorous workers equalizing both in numbers and stamina. Keep the colonies equal, and make them enter the harvest equal in numbers, age and vigor.

I shall not discuss in minute details all the little things

in the prior work, as to how each manipulation must be performed, etc., but having pointed out what is necessary to accomplish I leave the rest to the experimenter. Make sure that each colony has an equal chance; if they become unequal *make* them equal in bees, brood, stores, size of hive, and opportunities for work. Be sure to keep a record of *all* that happens to the colony—brood or bees added or taken, whether queen failed or lackt vigor, day and date of everything affecting individual colonies.

At swarming-time comes the greatest difficulty of all. Oh, for absolute control of swarming! We can equalize bees, brood and stores, but we cannot so well control the swarming matter, yet this is important to do else we lose in a large measure the previous work so far as accuracy in results is concerned. If one colony swarms, all the others should do so, and do it at the same time. I see no way out of this difficulty save to simply forestall *all* swarming, or, instead, cause *all* to swarm, and on or near even date. A part run for comb and a part for extracted makes it harder to manage. The comb-honey colonies will be almost sure to swarm, while few, or possibly not any, of those run for extracted would do so.

As for myself, I think I would unqueen and control swarming that way; but for those who may have a fall flow it would not do to unqueen in the early flow if the colony was expected to do good work in the late season. I think I should recommend unqueening for those who have but one comparatively short flow, and those having two flows, or one very long one of eight weeks or more, to introduce cells into each of the colonies, doing so just as they are likely to begin cell-building in any of the colonies, and give all alike and at the same time. The cells introduced should be unsealed, and perhaps two or three to each colony, for if given sealed some might not be willing to accept. I think unsealed cells—especially three or four days before sealing age—would be almost certain of acceptance, and also almost sure to cause swarming.

The fact that swarming makes a difference in the honey-gathering work, first by time lost *at swarming-time*, and, second, by causing the swarm to build comb where ready-made combs are not supplied, would make comparative results very unsatisfactory indeed as a basis upon which to build. It is imperative that in every single test the colonies *must* be alike in every way, or nearly so. Better that many apiarists simultaneously perform these experiments, each upon a few colonies more or less as he may be able, and each do a thorough job. Ten apiarists in as many locations, and each using 10 colonies, 5 to each side, would give us 100 colonies in the test, and in varied conditions. I hope that 20 or 30 at least will take up the work and join me in experimenting.

In my next article I will continue detailing other experiments. Meanwhile I would be glad to receive postal cards from any apiarists willing to help. I expect each to keep a record of the work showing in detail how it was done and the results, and a copy of the record sent to me. After receiving these reports I will compile the whole and place the same before the readers of this journal. It will help all bee-keepers, and, most of all, we who do the work.

Loveland, Colo.

Value of Bees to Fruit—Other Items.

BY H. S. PRICE.

I HAVE noticed the Editor's kind invitation for subscribers to write their experience with bees, the way they have them packt for winter, etc., and I thought ere this I would have written my experience. I rather expect, tho, next winter I will be better able to give an account of myself (or rather the bees), as last season was a very poor one for bees, and for fruit, too. Poor for fruit because we had so much rain that the bees could not get to the orchards to fertilize the blossoms. There was plenty of bloom, but it requires something besides just the mere bloom to make fruit—it must be fertilized.

We had one or two nice days during pear and cherry bloom, and the bees got to work on them, so we had a nice crop of each, but the apple crop was a failure. This is quite a fruit country, apples being the main crop, and when we have a failure in apples it means almost a failure in everything else.

I do not want to leave the impression that apples are all that is raised here, where everything grows in abundance, but we feel a failure in apples, I think, worse than anything else.

I have the management of the Plunkett Hill Fruit Farm at this place, and I sold, last season, $16.25 worth of fruit. It should have been that many hundred dollars, but the rain kept the bees in so they could not fertilize the blossoms, so we had only "a drop in the bucket."

I was the only one that had any fruit to sell in this section of the country, and if it were not for my bees I don't think I would have had 16 cents worth of fruit. I am, as you will see, a firm believer in my bees.

I have two reasons for keeping bees—pleasure and profit. Pleasure is derived from working with them, and watching them work; profit from the honey and the pollenization of the fruit. I have 24 colonies, all in modern hives. I expect to increase to 50 next season. Last season was my first in this section of the State. I know of no reason why bees will not pay, and pay big, for the extra work they may cause any one here.

We had bees at home (southeastern Missouri), and they paid there, and I think this a much better country for honey than that. The main things here for honey are fruits, linden, white clover, smartweed and Spanish-needle (commonly called "yellow blossom"). The latter is the most productive of all. In the fall there are thousands of acres of it here—it just looks like fields of gold. It lasts about four weeks, and the flow is surely great. It brings to mind the poet who wrote—

> "Full many a gem of purest ray serene,
> The dark unfathomed caves of ocean bear:
> Full many a flower is born to blush unseen,
> And waste its sweetness on the desert air."

There are acres and acres of it that bees never get to sip the nectar from a single blossom, there being no necessity for them going far from home—they have all they can do right at their door.

I have the 5-banded Italians to gather honey for me. I think they are by far the best bees. All those who want hybrids can have them, but I want the pure Italians. I think they are better workers, easily handled, and so much prettier than the hybrid or black bees.

I will sometime in the future write an article on the hive I use, and why.

Livingston Co., Mo.

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 55.)

The President's Annual Address.

Another year has past, and we are again in annual session of our Association. I am glad to meet you, and rejoice that we have had a reasonably prosperous year. True, we cannot boast of large crops, yet there has been a decided improvement over the past few seasons. So far as I have had reports from the various parts of the State, our general crop has been a fair one, and when compared with the average of the States we have no reason to complain. The failure in other States has redounded to our advantage by making a market for what crop we have.

We have reason to rejoice in the fact that our Association now numbers a membership of some 150, the largest membership ever attained. This growth is very encouraging, for it betokens a better condition of bee-culture in all parts of the State.

What has caused this increase of membership and general interest? Let me say to you, *work*. I do not want to seem personal nor a flatterer, but I do want the members of this Association to know that our very worthy Secretary, Mr. Frank Rauchfuss, has performed a labor of love. He has been untiring and unselfish in his labors in guarding and furthering the interests of this Association and the whole apicultural interests of this State. Your Executive Board and the general committees have workt together to make our Association second to none—not even the National.

Editor York, of the American Bee Journal, has very materially assisted in our work, and this Association is under obligation to him, which obligation I hope will be faith-

fully discharged. In a recent letter from Mr. York, he says that he always looks forward with much interest to the publication of the proceedings of this Association, and that he ranks it next to the National association reports, and expresses a desire that the report of this meeting be sent in to appear in his journal.

Colorado apiarists are lookt up to, and so is our product. I say this not to boast, but for our encouragement. Instead of being puft up let us rather be humbled, remembering that to whom much is given of the same much is required.

It is my sincere desire that this Association shall continue to grow in both membership and influence, until every apiarist in the State shall be enrolled as a member, and until there shall be a full and harmonious co-operation in the conduct of all our apicultural affairs.

Why do I desire this general interest—why encourage others to success when it is so hard now to find a market for our product? Know you not that freedom is and has been the foundation-stone—yea, is at the very bottom of our national prosperity? Could I monopolize the honey-production of this State, I should thereby *temporarily* advance my own financial interests, but in my doing so I should necessarily impoverish each of you as producers, and it is common-sense and the soundest of reason that to impoverish ninety-nine one-hundreths of the bee-keepers of our State not only affects these same bee-keepers, but many others in other pursuits as well, and eventually my monopolizing folly comes back as a curse on my own head. My product must sell if I continue to prosper, and only a prosperous people can buy my product. Were it not for the equalizing effects of panics and hard times we would, as a business community, quickly become slaves to the greedy, and soon the whole mass go down to one common grave.

Yes, your prosperity means mine, and I want you to prosper. The growth of this Association means that you will be aided to prosperity. I say you will be *aided*, for this Association cannot bring you prosperity against all other influences, but it can *help*. A large membership means more money to do the work of the Association. I want to call your attention to the fact that not one of us knows the burden and expense that is upon our Secretary in keeping the books of this Association, and in correspondence, and the time given to thought in solving the problems that are for our interests, and yet it has been freely given. I desire to see, this year, this Association grow to a membership of many hundreds, and a treasury of hundreds, and that out of that treasury our official servant, the Secretary, get an allowance that will justify him in working for our interests. This would be proper, just and right.

Shall we make the effort, or shall we not? Who will volunteer to do missionary work in the various parts of the State? I commend to this Association the plan of getting some good member in each location to "missionate" in getting members. I shall charge upon my successor to see that the will of this Association be carried out, and upon the members that they rustle and help in both money and work. If each one who is now a member shall get, during the next year, as many new members as has your humble servant during the past year, our next annual meeting should see on our roll near 1,000 names.

I am not offering any visionary scheme, but a business proposition that can be carried out if we put ourselves to the task. I ask that before we adjourn from this meeting we shall each pledge ourselves to the work, and begin the action that shall see not less than 500 stubs on the Secretary's membership receipt book. R. C. AIKIN.

A discussion then ensued on giving the Secretary a compensation. All were in favor of the idea, but as the condition of the treasury did not justify it, the matter had to be dropt. A motion was made to confer a loving cup upon the Secretary as a token of gratitude, but at his urgent request it was withdrawn.

The Secretary then made a verbal report of the work during the year, mentioning in particular the soliciting of new members, which resulted in a total membership of 154; the efforts made to create a marketing organization, and concluding with a statement of expenses and receipts.

A vote of thanks was then extended to Prof. Gillette, and he was made an honorary member for next year.

A DISCUSSION ON FOUL BROOD.

Mr. M. A. Gill had been down on the program for an address on foul brood, but had concluded to leave it to Mr. Foster. Mr. Gill said he had been inspector for three years in one locality where there was a great deal of foul brood, but it had been confined to that region by a sort of quarantine, bee-keepers agreeing not to buy or ship out from there. Mr. Foster spoke of the unwillingness of the Boulder county commissioners to pay for the work done.

Mr. Gill—If any work is done, a good deal is done gratuitously. If five bee-keepers in the county think the disease exists, an inspector can be appointed; and, if appointed, his compensation must be allowed under the statute. From my experience on the Western Slope, I would not advise any one to use a hive again which has not been disinfected.

Mr. Foster—Mr. Adams has more than he can do in Boulder county. He is expected to oversee 18,000 colonies.

Mr. Foster then exhibited a map of the vicinity of Boulder, comprising an area of about six by eight miles, with a large number of locations markt where foul brood exists, and stated how many cases were in each yard. One apiary had about 70 colonies infected out of a total of 140. There are not over two persons in the territory mapt who will send for an inspector. They are careless and indifferent.

H. Rauchfuss—A provision in the law says the inspector has to go where he knows foul brood exists.

J. E. Lyon—Does the inspector have to go when called on?

Mr. Gill—He does.

Pres. Aikin—Section 3 of the law says: "Every bee-keeper or other person who shall be aware of the existence of foul brood, either in his own apiary or elsewhere, shall immediately notify the County Inspector of Bees, if there be one, and if not the Secretary of the Colorado State Bee-Keepers' Association, of the existence of such disease, and in default of so doing shall on summary conviction before a Justice of the Peace, be liable to a fine of $5 and costs." Section 4 says: "On receiving notice from any source, in any apiary in his county, of the disease known as foul brood, or any other infectious or contagious disease of bees, the County Inspector of Bees shall forthwith inspect each colony of bees and all hives."

Mr. Adams—Suppose a man comes to me and orders me to inspect when it is freezing hard.

Mr. Martin—Is there any penalty if the inspector does not do his duty?

Mr. Gill—After the inspector has been notified he is amenable to the law as well as the owner. On the Western Slope men watcht me to find out any delinquency.

Mr. Lyon—I have askt Mr. Adams to go half-a-dozen times. Am I the man to ask him to go in freezing weather? Suppose it is freezing. Let us wipe out the inspector if he is no good. If he refused to go when it was too cold, why did he not go when the weather was favorable? We are overrun by foul brood. I do not mean to be personal.

Mr. Adams—I understand that. That is all right. But every one of the days that Mr. Lyon came, the wind was blowing from the north, and it was cold.

Pres. Aikin—This is simply a difference in judgment between two men. That point of the proper time was overlookt in the law. If particular colonies are known to be diseased, then any time will do. But whoever formulated the law didn't think of that.

L. Booth—The law is all right. The official is not expected to do his duty at an unseasonable time, but within a reasonable time and in a reasonable manner.

Pres. Aikin—You are correct.

Mr. Gill—The time of visit is usually agreed upon between the owner and the inspector. Usually there is no brood in the hives at the time referred to. The best time to inspect is when bees fly freely. I have inspected 3,100 colonies without a veil. There is always some time between June and January to inspect. One man can order the inspector to go to any part of the county.

Pres. Aikin—The law does not contemplate the unreasonable, but the point might be brought up whether a certain course is reasonable or unreasonable.

Mr. Foster—Early last spring I sent for Mr. Adams. He said the weather was not fit. I put up a tent and a stove, and he came. I think Mr. Adams does well with 18,000 colonies. At every sixth or seventh house, one sees bees. If he stops at every house he spends half his time calling. If he does not, he misses a good many. I say, take a small district and do it well.

Mr. Gill—Wisconsin claims the best law. One inspector does it all. The work can be thoroughly done. One inspector can find all the bees diseased. If I found no disease, I spent little time.

Mr. Honnett—Assessors make a list of products not taxt. They could add bees, and the inspector could get his information from them.

Mr. Adams—When my commissioners say, "You've got

to keep down the expenses," I haven't got the money to fight Boulder county and support myself and family.

Mr. Gill—And somebody else says to confine the inspector to $200 expenses—but the commissioners can't go against the law.

Mr. Rhodes—They do in some counties, but it is not the law that they should.

Mr. Adams—I'm hunting the man who gets $200.

Pres. Aikin—I have here some samples of combs infected with foul brood in an advanced stage after it has dried up. There is another disease like foul brood, and the test is the elasticity of the matter. But the dead brown matter at the bottom of the cells is a pretty good indication.

The samples referred to were put up in a securely enclosed box of glass and wood, the glass being on both sides, next to the faces of the combs.

The reading of the Inspectors' Reports followed, which are here put together and tabulated:

INSPECTOR.	COUNTY.	Colonies Inspected.	Colonies Diseased.	Colonies Transfer'd	Colonies Destroyed.
M. A. Gill.....	Mesa	2,921	69	49	20
R. C. Aikin	Larimer ...	47	3	1	.....
Chas. Adams.....	Weld	37	7	3	4
Mrs. A. J. Barber..	Montezuma	203	20	17	3
J. B. Adams.....	Boulder....	543	110	.....	.....
D. S. Jenkins	Bent.....	64	.....	.....	.....
Peter Kranz	Otero	586	9	.....	.....
T. A. Riggs.....	Arapahoe..	484	15	10	4
Significant totals,		4,885	233	80	31

During the last season there was no inspector in Jefferson county.

Mr. Gill added to his report these remarks: "The disease is still confined to one locality in the county, namely about Fruita. Thorough work has been done in this locality, but the infection seems to be among the wild bees of the community, so that nothing but eternal vigilance will ever stamp it out there; however, people in that section seem desirous to rid themselves of the pest, and are ever ready to assist in stamping out the disease."

Mr. Aikin also reported for his county that six hives where bees had died were ordered treated.

Mr. Jenkins, of Bent county, reported that he had only inspected for foul brood, and found none; but there is considerable paralysis, tho only a few serious cases.

The Treasurer's report was read and accepted, and also the following

REPORT OF COMMITTEE ON PERMANENT HONEY EXHIBITS.

Your committee would most respectfully report that we visited the Board of Capitol Managers, and made known our wishes as to a place in the building and a suitable case to make our permanent exhibit. We were courteously received, and assured that we could have the space and the receptacle.

Owing to some personal influence of which the committee do not wish to speak at present, all of our work has been of no avail.

Committee { J. H. RHODES, H. RAUCHFUSS, J. B. ADAMS, J. E. LYON.

[Continued next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey.. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Moving Bees a Short Distance to Winter.

Most bee-keepers winter their bees on the summer stands in this locality, but I always give mine some protection and generally move them to a sheltered place. I dig into a bank just enough to level the place for the hives, and set a row of hives on a 2x4 edgewise, and if the bank is high enough I put another tier of hives on top.

I move some of the hives from 30 to 200 feet from the summer stands to winter quarters, and our bees have a flight every few days all winter. Of course, some of them get muddled up in the first flight that they have, by being moved so short a distance. Do you think it is an error to move them? NEBRASKA.

ANSWER.—The mixing up of a few bees will make little difference, for what one colony loses another will gain. If there is a great deal of excitement it sometimes happens that a hive may be almost entirely deserted, and of course that's bad. There is a possibility, too, that the presence of a lot of strange bees may endanger the life of the queen, but as a rule I think you will find little loss from either cause. To help hold each colony to its own hive, it may do some good to put a board up close before the entrance, so the bees can get out only by going around the board.

Question on Contraction.

In contracting a 10-frame brood-chamber, say to seven frames, will the bees be likely to build combs to the bottom of the section-holders? NEW JERSEY.

ANSWER.—The simple fact of contracting from 10 to 7 frames would probably have little to do in the matter. In either case, with plenty of super room and proper spaces between brood-chamber and super, you will have a minimum of bur-combs, while you will be likely to be troubled with them in either case if the bees are badly crowded for room.

Splints to Prevent Foundation Sagging Spacing Frames, Etc.

1. What is your method of using wood splints for preventing sagging of foundation in brood-frames?

2. Will foundation cut to fill the frames, as you use it, cost more per pound than the regular size sent out?

3. I am using Hoffman frames, but intend hereafter to make my own frames, and use staples for spacers, as the Hoffmans are badly propolized. I notice on page 7 you recommend this style to "Illinois." Would you advise me to change the Hoffmans that I have? I can do this without much trouble, by sawing off the projection of the end-bars and substituting staples.

4. If I do this, the staple will have to project 5-16 inch, since the top-bars are only 1 1-16 inch. Now, I wish to make my top-bars 1⅛-inch, staple projecting ¼-inch. When two of these frames with top-bars of different width come together, they will be 1-16 nearer at one end than at the other. Will this give trouble?

5. What is the best style of queen-excluder to use when hiving swarms on starters?

6. Why cannot the Root zinc be used in making the honey-board composed of alternate strips of wood and zinc?

7. If you recommend this style, please describe it so that I can make it. NORTH CAROLINA.

ANSWERS. 1. The splints or little sticks are 1-16 square, and ⅛-inch shorter than the depth of the frame, inside measure. The paraphernalia needed to do the work are: A pair of pliers to lift the sticks out of the melted wax, a board to use as a presser, ¼-inch shorter than the inside depth of the frame; three or four inches wide and ¼ or ⅜-inch thick, with one edge kept well soakt in water so the wax will not stick to it, and a board ⅞-inch thick just large enough to slip loosely inside the frame, having strips nailed

on the sides as stops so that the foundation will rest on the board while the frame rests on the stops. Put a bunch of the sticks in the heated wax. They will froth up at first because of the air and moisture in the wood. In a little while that will be cookt out and the wax will settle down clear. Then with the pliers lift a stick out of the wax and lay it on the foundation, and with the wet edge of the presser press it into the foundation. Being hot it will melt its way into the foundation, and if prest too hard or too long may cut the foundation in two. A little experience will enable you to do it right. It is perhaps well to heat the wax little more than enough to keep it melted, for if too hot there will not be so good a coating of wax on it, and if you use a stick not coated with wax at all the bees will dig out the stick. The sticks are put perpendicularly, one about an inch from each end, one in the middle and one on each side of the middle one-half way between it and the end one.

2. No.
3. Yes, where propolis is at all plenty.
4. I don't believe it would make any serious trouble.
5. Probably the wood-zinc.
6. It can.
7. Make your wood-strips about 5-16 thick, an inch wide or less, having a saw-kerf in each edge to receive the zinc. Put together so that your honey-board shall be flat on one side and the other side shall have the ends and sides ¼ thicker than the rest. That will make a bee-space between the honey-board and the super.

Getting an Italian Queen Early.

Where can I get a good, cheap, Italian queen? I want one as early as I can get it. I think I could introduce it in March, or April at least. I got a colony of black bees last spring, but they didn't do well. It wasn't a good honey year, but there is an Italian colony right by the side of mine which gathered enough honey to nearly winter, and they are about twice as strong. They were started the same time. I got one colony a year ago, and divided it, but in the fall one of them left, and in February the other died, so I had to get another colony last spring. I intend to keep on, all the same, and make a bee-keeper of myself. The American Bee Journal is the only help I have, but it has been enough so far. MARY.

ANSWER.—Yes, you might introduce a queen in March or even in February, but all things considered it is not advisable. You'll be as well off if you get your queen in May, probably, running less risk in shipping, and by the time it will be advisable to get a queen you will see queens advertised by reliable dealers in this paper.

Alfalfa or Lucern—Van Deusen Self-Spacing Frames.

1. I have read much in the American Bee Journal of alfalfa being so good a honey-plant in the West, but the bees do not tackle alfalfa in the Northern States or gather honey from it. I was born in Germany, and can remember that almost every farmer had a lucern (alfalfa) field. Twelve years ago I ordered some lucern seed from Milwaukee. I noticed in the catalog that German lucern was priced differently from American alfalfa or sand lucern, so I think there must be a difference between lucern and alfalfa, for the bees do not visit my lucern.

2. Years ago I used the common hanging frames, but having much trouble with spacing and getting straight combs, I askt a supply dealer for a self-spacing frame. He showed me one which he called the Van Deusen. This spaced above and below, by means of little irons fastened on each corner. This frame suits me best of all. I have seen the Hoffman but would not want it. The bees cannot fasten the Van Deusen frame to the hive. What is the reason we do not hear anything in regard to this frame? and why do bee-keepers not recommend it? MICHIGAN.

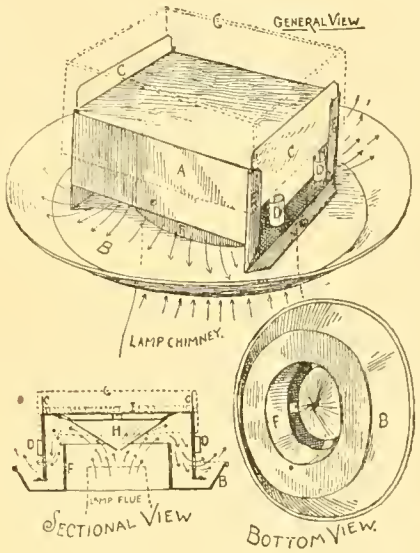
ANSWERS.—1. It is likely that the difference is not in kind but in place. In this region I never saw bees on alfalfa, altho it is the same as that farther west. It is not uncommon for an imported article to differ in price from the home product, even when just the same. Bokhara clover seed is imported into this country and sells at a different price from that of sweet clover seed, altho Bokhara and sweet clover are one and the same thing.

2. The Van Deusen spacers have been before the public for some years. Some agree with you in liking them, while others prefer the Hoffman or something else. I know of no special reason why more is not said about them, or why they are not recommended more, unless it be that a larger number have not preferred them.

Leveling Down Combs.

What kind of an instrument is used in leveling drawn combs in sections? I understand the cells should not be over ⅜-inch in depth when the super is first put on. I cannot understand why it is not just as necessary to level down the cells of the extracting-combs after they have been completed in the extractor. If good honey can be obtained by leaving full-depth cells in the extracting-chamber, why not leave deep cells in the super combs? MASS.

ANSWER.—Taylor's comb-leveler is the tool. It costs $1.00, postpaid, $1.25. The object in leveling is to cut away the edge of the comb that has become darkened. That will explain to you why it is necessary to level sections and not



The Taylor Comb-Leveler.

extracting-combs. The comb of the extracting-combs is not taken with the honey, hence there's no need to cut any of it away. Indeed, in most cases it would do no good, for you'd have to cut away all the comb to get rid of the dark part.

Some have insisted strenuously that the comb of sections should be leveled to ⅜ of an inch. I don't believe there ever was any good reason for that, and I have always held that all the leveling that was needed was to get rid of the darkened part. If the comb is pure white clear out to the edges of the cells, there's no need to cut any away, unless in rare cases in which the cells are so deep that they would be built fast to the separator. I think this view is now held by those who have insisted most strongly on the ⅜-inch.

Preventing After-Swarming.

I see by some of the bee-papers that one of the methods to prevent after-swarming is to place the primary swarm on the stand of the old hive, and remove the latter to a new location. It has also been found advisable to give the surplus cases to the new swarm. Now, in removing the surplus cases from the parent colony, is it best to rid them of bees before they are placed on the hive containing the new swarm, or should the supers be lifted off with the bees in them? MASSACHUSETTS.

ANSWER.—In taking the supers from the mother colony to give to the swarm, take bees and all. It's easier, and it's better. But if you do this when the swarm is first hived, there is danger that the queen may take up her abode in the supers unless barred by a queen-excluder. If no queen-excluder is used, better wait a day or two before putting the supers over the swarm. To make the plan more effective, it is better to put the old close beside the new one, and in about a week move the old hive to a new place.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Journalistic Courtesy.—The editor of Gleanings says he subscribes to the statement we made some time ago, that apiarian editors should give more attention to the matter of journalistic courtesy than has apparently been done within the past few months.

The Constitutional Amendments voted upon by the United States Bee-Keepers' Union were all carried, and almost unanimously, as follows:

First Proposition—To change the word "Union" in its name to "Association."

Second Proposition—Fixing January 1 as the time when the President, Vice-President and Secretary shall assume their respective offices, having been elected at the annual meeting preceding that date.

Third Proposition—Making it the duty of the Treasurer to give 30 days' notice of expiration of membership.

The foregoing amendments were recommended by the convention at Omaha last September.

By the way, on page 633 of the Bee Journal for 1896, will be found a sample constitution that we were requested to submit for consideration, in which Art. I reads thus:

"This organization shall be known as the 'United States Bee-Keepers' Association.'"

So, after all, at least that much of our proposed constitution is now in force. And it is all right. We tried at the Lincoln, Nebr., convention to keep the word "Association" in the name when the present constitution was adopted, but failed.

Philadelphia in Contemplation.—Last week we received this from Dr. A. B. Mason, Secretary of the United States Bee-Keepers' Association:

EDITOR AMERICAN BEE JOURNAL:—The following will explain itself. I have replied to it on behalf of the Association. A. B. MASON.

PHILADELPHIA, Pa., Jan. 16, 1899.

DR. A. B. MASON—
Sec. U. S. Bee-Keepers' Association.

Dear Sir:—It affords me much pleasure to inform you that the following preamble and resolution were adopted at the last meeting of the Philadelphia Bee-Keepers' Association, held on Jan. 14:

WHEREAS, We have been informed that the United States Bee-Keepers' Association contemplate holding their next convention in Philadelphia.

RESOLVED, That we send greeting to the United States Bee-Keepers' Association, expressing our pleasure at having them meet with us here.

Fraternally yours, F. HAHMAN.
Sec. Philadelphia Bee-Keepers' Association.

We understand that the Philadelphia Bee-Keepers' Association is one of the best of its kind in existence, having upward of 40 hustling members. And we believe they would take excellent care of the National convention of bee-keepers should the Executive Committee decide to hold the next meeting in Philadelphia. Personally, that is our choice, but this time we have nothing to say as to the place of meeting. We had our "say" the past two years, and we know that, aside from the lodging inconveniences at Buffalo, it was a splendid thing to go with the Grand Army of the Republic. As Philadelphia is where that great organization, with its low railroad rates, meets this year, we hope the convention of the United States Bee-Keepers' Association will also be held there at the same time.

Honey in Barrels.—Somnambulist formerly was in accord with O. O. Poppleton in favoring barrels for extracted honey. He gives in the Progressive Bee-Keeper a pitiful tale—albeit related in Sommy's amusing manner—of an experience which made him take to the fence, "with a most decided tendency to the other side." Eight barrels were kept over one year for a better price, but the contents of those barrels were not satisfied with their quarters, and started out on their travels, resulting in a loss of three barrels from the market, altho some of the honey was gathered up for feeding. One barrel that was waxt proved faithless like the rest. But he thinks honey is improved by standing in open barrels exposed to the action of the air for some time before it is put into cans.

Workers Reared in Drone-Cells.—A. Astor reports in Revue Internationale something that the editor says he has never seen—workers reared in drone-cells. A good many years ago, R. R. Murphy sent to the office of the American Bee Journal a piece of drone-comb from which young workers were emerging. They did not appear different in any way from ordinary workers.

The Goold Honey-Package has been hinted at in the Canadian Bee Journal, without a description being given. D. W. Heise says it embraces every important feature of a cheap and convenient package for honey, except that it is doubtful whether it will stand enough heat in water to liquefy honey. But why don't our northern friends tell us what it is made of?

Illinois Pure Food Association. Some time ago we called attention to a meeting to be held in Champaign, Ill., Dec. 13, in the interest of pure food legislation. As a result of that conference, the Illinois Pure Food, Drug and Seed Association was organized, and a permanent organization was effected, the following officers being elected: President,

A. P. Grout, of Winchester; Vice-President, H. Augustine, of Normal; Secretary and Treasurer, H. S. Grindley, of the University of Illinois. An Executive Committee, composed of prominent representatives of a number of State organizations interested in the subject of foods, was elected. We notice that Mr. Jas. A. Stone, Secretary of the Illinois State Bee-Keepers' Association, is a member of the committee. The conference adopted the following resolutions:

RESOLVED, That it is the sense of this Conference that a bill should be enacted into law which should prevent the sale of articles of food and drugs in Illinois which are harmful to the consumer, and which will also regulate the sale of mixt products under proper regulations, to the end that the health of the people may be protected from injurious products of manufacture, and that mixt products shall not be past upon the consumer in lieu of the higher priced genuine article. Said bill is to include also the regulations regarding the sale of farm and garden seeds.

RESOLVED, FURTHER, That we believe it necessary that a State Commissioner or Commission should be appointed to carry out the provisions of the law.

RESOLVED, That the Executive Committee is hereby instructed to secure the co-operation of all persons and associations interested to assist in the carrying forward of this work, and that the committee be authorized to draft a bill along these lines, and secure its enactment into law.

RESOLVED, That the Committee be authorized to call a meeting, if they consider it advisable, and submit the drafted bill for further consideration before its introduction into the legislature.

The Executive Committee appointed Senator H. M. Dunlap, with the assistance of Sec. Grindley, to draft the proposed bill upon lines indicated by the conference that all interested take an active interest in the subject. The committee would also like to have suggested any facts or measures which should be given consideration in framing a bill directed to the end in view.

Bees Breeding in the Cellar.—Dr. A. B. Mason has this paragraph in a letter we received from him dated Jan. 21:

"The statement of some of our great lights, that bees don't breed in the cellar, is given a whack every winter by my bees. I believe every colony is stronger now than when put into the cellar last November, and not a sign of disease."

EDITOR E. R. ROOT is the subject of a curious mistake that is going the rounds of the foreign bee-journals, to the effect that "Mr. E. Root, editor of American Gleanings," has for more than 50 years practiced clipping queens, and likes the practice. As Mr. Root has not yet seen 37 years, he may be excused for having some doubt as to the correctness of the statement.

* * * * *

DAIRY AND CREAMERY is the name of a new 16-page semi-monthly paper, devoted to the advancement of the dairy, creamery and stock interests. A free sample copy may be had by writing to J. Lewis Draper, 270 Dearborn St., Chicago, Ill., and mentioning the Bee Journal. The subscription price of the Dairy and Creamery is 50 cents a year. We will order it for you for one year as a premium if you will send us one new subscriber to the American Bee Journal, with $1.00.

* * * * *

MR. C. THEILMANN, of Wabasha Co., Minn., wrote us as follows Jan. 23

DEAR EDITOR YORK:—I herewith hand you $1.00 to go in with those winners of the Dot contest who are willing to give their prizes toward the Langstroth Monument Fund. I hope that every one of the winners will consent to your ingenious suggestion, to raise and increase this fund for putting up a respectable stone over the resting-place of Father Langstroth, which he so justly deserved.

I have never read anything in all the bee and other papers that pleased me so highly as did your suggestion to the winners in that Dot contest, as it amounts to a big sum if all consent, while none will feel any poorer in giving the small amount, and all will feel cheerful to think that they are having an interest in honoring Father Langstroth with a monument.

Yours truly,
C. THIELMANN.

Yes, Mr. Theilmann, you would be surprised to see how many have thankt us for suggesting that the Dot cash prizes be turned into the Langstroth Monument Fund. Of course none of them will feel a contribution made in that way. Many only regret that their amounts are not larger. But to all from whom we do not hear by Feb. 15, we will mail the amounts due them; and all who notify us to place their prize amounts in the Monument Fund will be acknowledged in the Bee Journal later on, no matter if it is only a nickel contribution.

* * * * *

MR. H. W. BRICE—a prominent bee-keeper and writer in England—says in the British Bee Journal that the fruit crop on a farm near one of his out-apiaries is worth $500 a year more than it was without the bees. So says an item in Gleanings. It is just such intelligent and conclusive information as this that will help to cure the blindness on the part of many fruit-growers who are enemies of bees when they should be their friends.

* * * * *

MR. H. W. BUCKBEE'S Seed and Plant Guide for 1899 is one of the most elaborate and complete catalogs we have seen this year. It contains 132 pages, and will be sent to you free upon receipt of your name and address. Write for it, to H. W. Buckbee, Rockford, Ill., not failing to mention the American Bee Journal when doing so. The name "Buck*bee*" should commend him to bee-keepers—on account of the very familiar latter part of it.

* * * * *

MR. J. H. MARTIN (Rambler), of Los Angeles Co., Calif., wrote us Jan. 20:

"We have had a good rain, but it is far from enough to ensure a honey crop. The conditions are however favorable to the continuation of additional rains. The absence of moisture another season would about use up the industry in this State. Still, the person that has the grit to hold on would reap a benefit in the end."

* * * * *

MR. S. T. PETTIT, of Ontario, Canada, writing us Jan. 21, said:

"I am now in my 70th year. How rapidly life glides away. You cannot realize it yet, but the serious fact will rush upon your mind before long. It is a good thing to work while we can."

Yes, we already realize how fleeting time is. It will soon be 15 years since we first began to work on this journal, and yet it seems only a few months ago. Being so busy helps to speed time on its way. Verily, "It is a good thing to work while we can," for "the night cometh when no man can work."

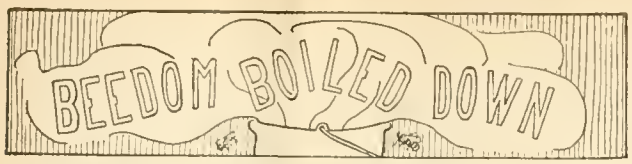
* * * * *

Dr. F. L. PEIRO, of Chicago (office in Central Music Hall), is well known to many of our readers, as he has written quite frequently for our columns, and also has attended several national conventions. He visited the Pacific Coast some time ago, and called on some of the bee-keepers. Here's what he has to say about his meeting Prof. A. J. Cook, who lives near Los Angeles, Calif.:

"What! Didn't I tell you about meeting Prof. Cook in Santa Barbara, on my recent visit to California? Well, I did, and I envied his delightful situation. Seated like a king on his (street-car) throne, surrounded by as charming a bevy of ladies as you could see in a great journey—there he was, dispensing smiles and information as easily and genially as if it were an every day occurrence. Old, did you say? Bless you, no! He's not that kind. He'll be young another 50 years, at least.

"The very next day I met him again. This time I cornered him! I sat in his seat, next to the aisle, and he *had* to stay in that railroad car. Couldn't get out. Then we had it. He told me much about his part of the State, near the famous 'Redlands;' about bees, and the new house he was building, etc.; and told in so delightful a way I was charmed with his engaging companionship. I wanted to ask a lot of other questions, but you know how quickly time passes in pleasant company. Almost before I knew it we were too-tooting into Los Angeles, and there our paths diverged.

"Joy be to him and his, always." DR. PEIRO.



Logwood is reported, in Southland Queen, as the best honey-plant in the island of Jamaica. It comes into bloom in January.

Cypress Half-Barrels for Honey are preferred by Dr. Blanton. When dry they weigh 27 to 29 pounds, and absorb three pounds of honey.—Gleanings.

Drone-Cells Opposite Worker on Same Comb.—"I once had a full sheet of heavy brood-foundation, one side every cell drone-comb, whilst the other was all worker," says J. W. Green, in Australian Bee-Bulletin. Is there no possible chance for mistake in that?

To Stop Robbing.—Set in a new place the hive that is being robbed, and put in its place one of the strongest colonies. Do this in the evening. Robbers begin work early in the morning, and will get a warm reception. After a little fighting they will give it up.—Gleanings.

A Woodpecker's Work.—A bee-keeper was greatly surprised to find that a colony that had been unusually heavy had become very light. A hole was in the side of the hive, and on watching he found a woodpecker was the aggressor, perhaps being aided by others.—Wegweiser.

Market Quotations appear to glory in giving the lowest prices, says the Canadian Bee Journal, and if in Toronto, Montreal, or some other cities a few culls have been sold at 6½ cents a pound, the public, without explanations, see in the press that comb honey is selling at from 6½ cents to—. The tendency of this is to depress prices.

Darkening Hive-Entrances for Winter.—Franz Ebster, in Deutsche Imker, considers it of very great importance that colonies wintered out-doors should have the entrances well shaded. During the winter rest the bees should not be able to tell day from night, least of all should they be able to tell that the sun is shining. They will keep quieter, consume less, and endure the winter better.

Arizona Honey.—C. A. Hatch says the principal sources in the Salt River Valley are three: mesquite, which does not yield every year, and gives honey a shade darker than good white clover; alfalfa, the main reliance, with honey nearly equal to that of Colorado or Central California in flavor, but much darker; ground-cherry, which yields some years largely, and compares favorably with eastern buckwheat.—American Bee-Keeper.

To Prevent Swarming, R. C. Aikin says there are two ways: "Hive the queen and bees in one section of the hive just as the flow comes on, making a new or strengthening weak ones with the brood, or by excluding the queen from part of the hive 10 days prior to the flow; then at the beginning of the flow take the queen and unsealed brood to a new stand, and give the bees and *sealed* brood on the old stand a ripe cell or virgin queen.—Progressive Bee-Keeper.

Credit to Whom Credit is Due.—This Boiler was obliged to get down on his marrow-bones because when mentioning some items brought out in the discussions of a convention, he failed to mention that the report of the convention was given in Canadian Bee Journal. Will the editor of that esteemed journal please print some words that will show he has assumed the same attitude when he notices that he has omitted to give any credit for the first half of page 452 in his paper?

Doolittle on Adulteration.—Mr. Doolittle, in the Progressive Bee-Keeper, thinks there is more noise about adulteration than the facts will warrant; that there is less adulteration now than formerly. If Mr. D. will go over the markets as some of us have done, especially in the large cities, I think he will have reason to change his mind. It is true, honey has come down in price, and so also has glucose, and very nearly in proportion. If Mr. D. will take the pains to get the price on glucose by the carload he will find that there is a good margin for adulterating yet. If there were not, there would not be so much of it. I dislike to talk about adulteration as much as any one; but if we bee-keepers try to cover up the fact, or try to convince ourselves that it is not as bad as some folks think, the glucose-mixers will take new courage. All they want is to be let alone. In that respect they are like the saloon-keeper, whose business Mr. Doolittle and I mutually despise.—Gleanings.

Cleaning in the Spring.—In the Progressive Bee-Keeper, R. C. Aikin says to clean up hives and frames in April or May, depending on latitude and season, and the bur-combs trimmed off will pay for the labor, leaving the combs much pleasanter to handle throughout the season. Doolittle thinks not enough wax could be accumulated in one season to pay for the work if top-bars are ½ to ⅞ thick, as used now by most apiarists. When he finds a colony gives an extra amount of bur-combs, he replaces the queen.

Getting Frames Filled with Brood.—Frames which have brood at the front end and honey at the back are reverst by R. C. Aikin, in the early season, or if the hive allows, it is turned half around, so the brood will be at the rear and the honey toward the entrance. This makes the bees fill up the whole of the frame with brood. A good scheme, where honey is thus found in one end of frames, but those whose bees fill the frames with brood from one end to the other without any attention on the part of the bee-keeper, are saved the labor of such manipulation.—Progressive Bee-Keeper.

The Dickel Theory has taken up a good deal of space in the German bee-papers, but has been little noticed on this side the water. The theory is that all the eggs laid by a fecundated queen, whether in large or small cells, are fertilized alike, and after they are laid the workers decide their sex by the food. L. Stachelhausen, himself an able bee-keeper and a well-informed German, gives, in the Southland Queen, an account of the theory, then gives some arguments of his own and others to show the fallacy of the theory, saying, "It is astonishing that this controversy could have so much space in German bee-papers, and that a man like Mr. Dickel could have any influence."

Making One's Own Hives.—W. Z. Hutchinson says he buys sections and shipping-cases, but makes his hives. He is "near planing-mills that have good machinery and competent workmen," with lumber cheap, so it costs him much less than to send to a bee-hive factory. But that's hardly making his own hives. I suppose the only difference between him and me is that he gives special instruction how his stuff shall be cut. He says wisely that each one must decide for himself which is best for him. [W. Z. Hutchinson does just the right thing; but there are few, comparatively, who are so favorably situated. By far the great majority are out of the vicinity of cheap lumber. Indeed, they could buy the hives all made up in the flat about as cheaply as they could buy the same superficial surface of plain lumber.—ED.]—Gleanings.

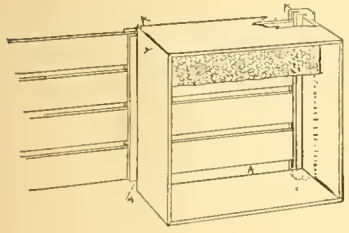
Larvæ in Queen-Cells.—R. C. Aikin, in Gleanings, says he has unqueened about 1,000 colonies in the past nine years. He always counted that there would be positively no swarming for 10 days after the unqueening. He aimed to visit the unqueened colonies the ninth day after unqueening, when no unsealed larvæ would be present, but frequently it happened that queen-cells were not cut till the 10th and 11th days, and sometimes not till the 12th and 13th. He found that a *very* small percent would have a queen emerge the 10th day *after* the unqueening, and even a very small percent the 11th day, while some went to the 13th and 14th days. Probably half the colonies had a queen to emerge by the end of the 12th day, tapering from that to the 15th. Counting 16 days to mature a queen, the majority must have started with larvæ not more than four days from the laying of the egg, and by far the larger part inside of five days. But this does not at all prove that such queens are equal to those reared for swarming or supersedure. The editor is very emphatic upon this point, and says in a footnote: "If there is any one thing about which I feel pretty sure, it is that queens reared from cells built in a colony that is suddenly made queenless, are not the equal of swarming or supersedure queens, in prolificness, size, or longevity."

Root's Column

We have a great many interesting things to show you, but owing to a want of space we can present to your consideration only one thing at a time.

Our 1899 Fences....

The Fences that we sold last year were so nearly perfect that the illustrations in our Catalog for last year answer for the 1899 goods. There is, however, a slight difference. The cross-cleats, instead of being ½-inch wide, are 5-16, and the slats themselves a little narrower—just enough narrower so that the top slat will drop down ¼-inch from the section, shown at A, in the drawing below.



We are almost daily receiving very flattering reports of honey put up in plain sections. Mr. J. E. Crane, of Middlebury, Vt., one who has no interest in supplies, having recently been over the markets of the East, says that honey in plain sections was all cleaned up in some markets, and that there was a demand for more. While this may not be true in other markets, it is a fact worth considering. When you place your order for comb-honey supers the coming season, consider.

But the Fences and Plain Sections are not the only latest feature to our Supers and Hives. In the next issue we will show you some conveniences that will be readily appreciated.

Keep your Eye on this Column, for it may save you Dollars.

The A. I. Root Company

MEDINA, OHIO.

In the multitude of counsellors there is safety.—Prov. 11-14.

Bee-Keeping as a Business.

Query 89.—Would you advise any one to follow bee-keeping as a business in the United States? That is, to depend upon its results for a livelihood—be a specialist in honey-production?—ANON.

S. T. Pettit—Yes.

W. G. Larrabee—No.

Prof. A. J. Cook—That depends. Yes and no.

Chas. Dadant & Son—Yes, provided you do not keep less than 300 to 500 colonies.

G. M. Doolittle—Well, that is what I am doing, and what I do any one else can do.

Jas. A. Stone—I am of the same mind in bee-keeping as in farming—don't believe in specialties.

Dr. J. P. H. Brown—Best not to risk all your eggs in one basket. Have some more strings to your bow.

R. L. Taylor—No, not *any one*, but any one who has a taste for it, and who is able-bodied, active and skillful withal.

J. M. Hambaugh—Location has much to do with this question. I would say yes were the conditions right; otherwise, no.

Eugene Secor—There may be localities where bee-keeping as a business will pay, but such places are not plentiful, in my judgment.

O. O. Poppleton—No man can fully advise another—a stranger—what business to follow. I have myself been doing as the question suggests for over 20 years.

Emerson T. Abbott—Not unless you have a good farm to fall back on. Bee-keeping is a part of agriculture, and, as such, should be carried on with other agricultural pursuits.

J. A. Green—Doubtless there are many localities where a specialist would do well. But I believe the time has past for bee-keeping as an exclusive business in my locality.

A. F. Brown—No, SIR! True, there are lots of specialist men who make the production of honey their sole business and livelihood. Still, it's a business equal, almost, to gambling.

C. H. Dibbern—It would not do in my locality, as there are entirely too many failures in seasons. There are no doubt many sections where such a course would be safe and profitable.

Mrs. L. Harrison—Not every one; special qualifications are needed—not only a good producer, but a good seller. A careful, painstaking person who looks after the odds and ends may succeed.

R. C. Aikin—Specialism requires more of a reserve bank account to tide over failures than does "mixt farming." A mixture may succeed almost anywhere—specialism only in favorable localities. In the right field, and

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

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ON POULTRY FOR 1899 FREE.

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J. M. Jenkins, Wetumpka, Ala.

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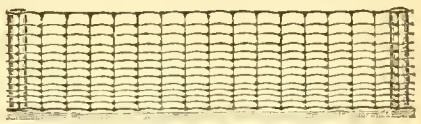

"WE'VE DONE EXPANDED,"

is the way Judge Culberson, of Texas, sums up the "Eastern question." Well, who cares if Uncle Samuel has followed the example of Page fence.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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We make the New

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For ¾ Pound at $3.75 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.75 per gross; 5 gross, $3.50 per gross. Address,

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118 Michigan Street, - CHICAGO, ILL.

SOLD ON TRIAL!

Buy no incubator and pay for it before giving it a trial.

Many people have lost faith in incubators because they bought one that was never intended to hatch chickens—made merely to sell.

The Von Culin Incubators are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c.

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We have about 100 second-hand 60-pound Cans, two in a case, that we offer, while they last, in lots of five or more cases 10 cans at 40 cents a case, f.o.b. Chicago. Better order at once if you want some of them. Address.

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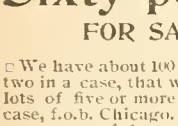

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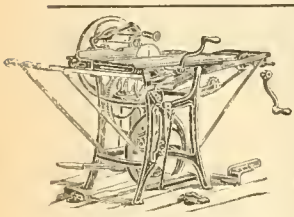

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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Send me your name, whether you are a small or large consumer or dealer.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

for the greatest success financially, I say yes; but for the most enjoyable life and the best citizenship, I say a mixture.

D. W. Heise—I cannot say as to the United States, but as a Canuck I would consider it unwise for any one to launch into bee-keeping as a specialist, and depend upon it for a livelihood in Canada.

Rev. M. Mahin—I would advise the very few not the many—to make the business a specialty, and to depend upon it mainly for a living. But in general it is not well to carry all the eggs in one basket.

J. E. Pond—No, I would not. Not one in 50 can do so and make a success. I speak generally. Once in awhile a good living can be made, by a person especially fitted by Nature and study, but as a rule it can't be done.

P. H. Elwood—Bee-keeping has afforded for the past few years a very poor living to a majority of those who depend entirely upon it. Whether prices and other conditions will permanently improve remains to be seen.

Dr. C. C. Miller—That depends. Certainly not, if money is your chief aim. If the most you care for is to live a healthy, happy, and useful life, even then it will hardly do to make bee-keeping your sole business, unless you have some money laid by to fall back on.

G. W. Demaree—I would not advise every one to enter the bee-business, far from it. If your inclinations lead in that direction, and you have no business that pays for your time and labor, honey-production offers a field of fascinating work with fair profits to the man suited to the business.

E. S. Lovesy—Under favorable conditions, yes. I am trying to make my living in the business. Without saying whether I have acquired it or not, I would advise a practical knowledge in the bee-business, as it is more or less like Paddy's flea—now you think you have it, and now you don't. The bee-keeper is liable to a hundred accidents or misfortunes, and if he would obtain success he must be able to grapple with and apply all necessary remedies at once.

GENERAL ITEMS

Expects Successful Wintering.

Bees are all in the cellar and apparently very contented, with every prospect of a successful wintering. The past season was a rather moderate one here, and in Cairo, this State, while my bees in Colorado have done better than for several years.

Greene Co., N. Y., Dec. 26. O. R. COE.

Bee Journal Worth $105 to Him.

I would not be without the Bee Journal, for it is worth its weight in gold to every bee-man who keeps bees. I can't see how a bee-man can do business in selling honey and wax if he is not posted on the market prices and crops of the different States. Last year I had over 12,000 pounds of honey. I sold my honey from 4 to 4½ cents a pound. When the honey dropt to 3½ cents I had over 6,000 pounds on hand, but I did not sell for that price. I saw in the Bee Journal

Mentionthis paper.

EVERGREENS

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 5 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

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WONDERFUL DOGS It is simply marvelous how the Scotch Collie dog will learn to do your work for you, as well as protect your children and your home. Everybody pleased with ours and the prices. They are secured as fast as we can produce them. Write at once for particulars to POTTS BROS., box 10, Parkesburg, Pa.

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is simple indeed. Kerosene emulsion made while pumping. 12 varieties sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."

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BARNES' FOOT POWER MACHINERY

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
5Ctf 995 Ruby St., Rockford, Ill.

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Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.

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INCUBATORS & BROODERS ....All about them. How to make and how to use successfully. Fully illustrated in Poultry Keeper Illustrator No. 2, 25 cts. Send for free sample copy of POULTRY KEEPER with particulars about other valuable poultry knowledge. Address, Poultry Keeper Co., box 10, Parkesburg, Pa.

Ctf Please mention the American Bee Journal.

The American Poultry Journal

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

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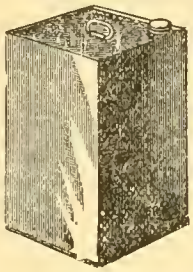
EXTRACTED HONEY FOR SALE.

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



BASSWOOD HONEY.

This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

We Want Every bee-keeper to have a copy of our.....

1899 Catalog.

Send us your name and address and we will take pleasure in mailing you a copy.

G. B. LEWIS COMPANY,

Watertown, Wis.

SPECIAL AGENT FOR THE SOUTHWEST,

E. T. ABBOTT, St. Joseph, Missouri.

Mr. Abbott sells our Hives and Sections at Factory Prices.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each,	by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

SAVE $8 ON A HARNESS!

We are the largest manufacturers of harness and carriages in the world selling to the consumer exclusively.

WE HAVE NO AGENTS, DEALERS OR MIDDLEMEN.

We sell you direct from the factory at wholesale prices and save you all additional expense. We ship anywhere for examination. We guarantee and warrant everything. **This Elegant Team and Farm Harness for $19.50.** Many customers who have bought it report that they have saved from $8 to $10 in buying this harness from us. For full description of this and 60 other styles of harness and 125 styles of vehicles see our new illustrated Catalogue. Your name on a postal card will get it.

Elkhart Carriage and Harness Mfg. Co.,

W. B. PRATT, Secy. **ELKHART, INDIANA.**

Please mention the Bee Journal when writing Advertisers.

that in different States the honey crop was light, and not of very good quality, so I kept my honey for better prices.

A buyer's agent came along and offered me 4 cents a pound. I said, "No, the honey is worth more." He argued that there was plenty of honey all over the East. I replied, "I know better." "How do you know it?" he askt. I replied, "I read a reliable paper, which gives the production of honey and prices, and that is the American Bee Journal."

"Well," said he, "Papers don't make prices," and started off. Last week he came and paid me 5¾ cents a pound. I sold 6,000 pounds to him, and I made a profit of $105 over his first offer of 4 cents. This $105 I made by reading the American Bee Journal, otherwise I would have sold the honey to him for 4 cents a pound.

Also the Bee Journal gives good information to beginners, telling them how to handle bees. F. S. BUCHHEIM.

Orange Co., Calif., Dec. 22.

Bees Have Not Done Well.

My bees have done no good for the last three years, still I do not think I can do without the "old reliable" American Bee Journal. W. H. PRICE.

Park Co., Colo.

Call them "Schmidt's Hardy Bees."

The North winds are blowing and our bees are flying. We take pleasure in sending you a sample of our bees, which were pulled out by the workers Dec. 18—dead ones, of course. But it is astonishing to see bees flying while one has to use an overcoat, a fur cap and mittens, to keep warm. We have 45 colonies of these "toughs" that were flying, while the Italians did not show up at all. Please name these hardy bees in the "Old Reliable."

R. H SCHMIDT & CO.

Sheboygan Co., Wis., Dec. 26.

A Question of Botany.

I would respectfully suggest that your correspondents, Messrs. Moore and Golden, brush up a little on botany. They confound sunflower, *Helianthus*, with thornapple, Jamestown weed, Jimson weed—*Stramonium*. While sunflower would probably make good smoker-fuel, it has no narcotic properties. On the contrary, *Stramonium* is a powerful narcotic, and its smoke might be expected to subdue the most vicious bees. R. H. LEE.

Carroll Co., Ohio.

Very Poor Honey Crop.

I do not see how any bee-man can do without the American Bee Journal.

We had a very poor honey crop here this season. ERWIN GABRIEL.

Green Co., Wis., Dec. 26.

Gathered But Little Surplus.

I have seven colonies of bees. I am not getting rich at them, and fuss with them for a supply for the house. This year they gathered but little surplus.

L. D. THURSTON.

Wyoming Co., N. Y., Dec. 27.

Honey-Dew, Sweet Clover, Etc.

I commenced the season of 1898 with 50 colonies, increast to 53, and got 700 pounds of the darkest stuff I ever saw. I sold it at 8⅓ cents a pound—all my conscience would allow. It was gathered from the tops of large timber, white oak mostly. I would give something pretty to know what it comes from.

My bees are not in as good condition for winter as I would like, but the prospects are good for next year, for white clover honey.

Will sweet clover do any good 160 miles south of Chicago? It has bloomed for two

MONEY IN SEEDS FOR YOU!
The Greatest Opportunity to MAKE MONEY that may ever Come to You!
You are sure of the Finest Garden Vegetables and stand twelve chances to make from $500.00 to $5,000.00. From a single package of seed, in 1898, Mr. F. C. Jameson, of Boston, Mass., cleared $500.00 and writes that he will clear $5,000.00 in 1899.
SPECIAL OFFER!
Liberty Collection!
SEND 25 CENTS
To Pay Postage and Packing.
12 Liberal Pkgs.
Made to Build New Business.
Write to-day and Mention this Paper
I wish 500,000 New Customers in 1899 and will send the Liberty Collection, comprising 12 liberal packages of the following New Seeds:—Beet, Red Cross; a beauty. Brussels Sprouts, Dwarf Perfected. Carrot, Golden Red. Celery, Bouquet; the finest. Musk Melon, Triumph; the best. Water Melon, Everbearing; sweet red core. Parsley, Greenside. Pepper, China Crown; fruits often sell for 15c. each. Radish, Golden Market. Squash, Early Spring. Tomato, Roseland Peach, and the Wonderful Cuban Giant Onion—Postpaid for only 25c. to cover postage and packing—together with my New Catalogue for 1899—tells how to Make the Garden and Farm Pay. Handsomely illustrated and up-to-date. You can't afford to be without it. Over ten millions of dollars made in 1898 by planting Buckbee's Seeds. Come with us and make 1899 the Banner Year of Prosperity!!
H. W. Buckbee, Box 537, ROCKFORD, ILL.
Rockford Seed Farms.

Please mention Bee Journal when writing.

years here, and the bees have workt on it very little. How does it do in Michigan, say about Oceana and Mason Counties? How is that county for bees, anyhow?

I have just been down in Florida, but I could not recommend it in any way except for health, water and climate.

R. R. STOKESBERRY.

Vermillion Co., Ind., Dec. 28.

[Will any one who knows, kindly reply, briefly, to the questions askt in the foregoing?—EDITOR.]

Had a Good Season.

We had a good season with the bees this year. My best colony produced 144 one-pound sections of honey. Of course we give the American Bee Journal credit for part if not all of our success.

I have in the cellar now 33 colonies, all of which I think are in good condition for winter.

Success to the American Bee Journal.

H. W. SAVAGE.

Sauk Co., Wis., Dec. 26.

Bees' Earnings Satisfactory.

For some years I have been handling bees as an amateur. Last season my colonies had so increast that I purchast others and establisht an apiary, having now between 70 and 80 colonies. The spring and early summer were too rainy for the best results; but, after all, the earnings of my workers were satisfactory. In this new industry I have found the Bee Journal of great value. Its information is practical and useful in a high degree.

E. STUART, M. D.

Ellis Co., Tex., Dec. 29.

A Very Poor Season.

I have 55 colonies of choice-bred Italian bees wintering on the summer stands, and all seem to be in good condition yet. The past was a very poor honey season. I had only about a third of a crop, and that all buckwheat, but of the very best quality. A great many bee-keepers did not even get a third of a crop, but nothing.

PAUL WHITEBREAD.

Luzerne Co., Pa., Dec. 27.

Poor Honey-Year, Etc.

It has been a poor honey-year with us. I had 10 colonies, spring count, and have 17 packt on the summer stands for winter. Not half an average crop of honey this fall.

I am over ¾ of a century old, and am

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Please mention Bee Journal when writing.

Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. Millions of Sections - Polisht on both Sides.

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalogue and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

IDtf AUGUST WEISS, Hortonville, Wis.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

MAKE MONEY OUT OF POULTRY.

It's easy if you only know how. Our Catalogue and Poultry Guide tells how. Gives the experience, plans, etc., of the best and largest poultrymen of the country. Tells also about THE FAMOUS **CYPHERS INCUBATOR** which is delivered, freight paid to every purchaser. It needs no moisture. Controls this point completely. Possesses the good points of all machines and the faults of none. Buy the book and be informed. Price 10c. The CYPHERS INCUBATOR CO. Box 50, Wayland, N.Y.

Please mention Bee Journal when writing.

growing neither younger nor handsomer, but feebler. I was an editor once, for more than 30 years, on a daily paper, but quit that 10 years ago—then spent three years writing a history and now am on a farm, with inability to work it—can only do some choring, take some care of the bees and Belgian hares, and cultivate the garden a little. ALBERT BAXTER.

Muskegon Co., Mich., Dec. 28.

Too Dry for Bees.

Bees did not do very well the past season, as it was too dry from July on. I have 16 colonies, and got only 250 pounds of honey. Last year was a little better, as I got 450 pounds. R. H. BERGFELD.

Hardin Co., Iowa, Dec. 29.

A Poor Season in 1898.

We had a poor season here—160 pounds of comb honey from 21 colonies. One colony stored 21 pounds of surplus, while a number put none in the supers. There did not seem to be much nectar in anything. Bees are out strong today, seeming to be in good condition. I hope next season will be a good one. Success to the Bee Journal.

WM. M. MILLER.

Franklin Co., Kans., Dec 28.

Bees in Bad Condition.

Bees did very poorly here this season, and are in bad condition to winter. They have good honey, but the bees are all old.

D. S. BURBANK.

Blackhawk Co., Iowa, Dec. 26.

Bees Did About Medium.

The American Bee Journal is a fine bargain at $1.00, and should be snapt up by every bee-keeper in the land.

Bees did about medium here last season. From 14 colonies I got 1,024 pounds of honey, one-third comb, and increast to 20 colonies. L. DICKERSON.

Grayson Co., Tex., Dec. 28.

Bees Wintering Finely.

I can't keep bees without the American Bee Journal. My bees are all in the cellar and doing finely. A. J. FREEMAN.

Neosho Co., Kans., Dec. 28.

THE WOOD BINDER. PATENTED SEPT 24TH, 1895

THIS

Wood Binder

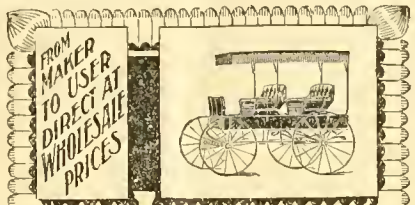
will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

ADDRESS,

GEO. W. YORK & CO.

118 Mich. St., Chicago, Ill.



BUY DIRECT AND SAVE MONEY.

"Money saved is money earned." We make a complete line of Surries, Phaetons, Buggies, Spring Wagons and Road Wagons, and sell them to you direct at wholesale prices

Best Spring Wagon Made.

Two and three seat. Some styles

as low as $37.60

C. B. Mastellar, Milo, Kans., writes: "Received No. 928 Combination Spring Wagon in fine shape. Consider I saved $25.00 by dealing with you."

YOU are NOT too far away to do business with us and save money. Send for new illustrated catalogue—FREE. All prices marked in plain figures. Complete line of harness $1.80 and upward.

EDWARD W. WALKER CARRIAGE CO., 50 Eighth St. Goshen, Indiana.

Please mention Bee Journal when writing

YOUR WAGON WHEELS

may need new rings, new spokes or new tires. These repairs have to be made every little while with wooden wheels. Stop all this expense for all time by buying a set of our

ELECTRIC Steel Wheels

They are made with direct or staggered oval spokes, broad tires, any height, and to fit any wagon. They can't rot, go to spokes and need no tire setting—last indefinitely. There is only one thing better, and that is an

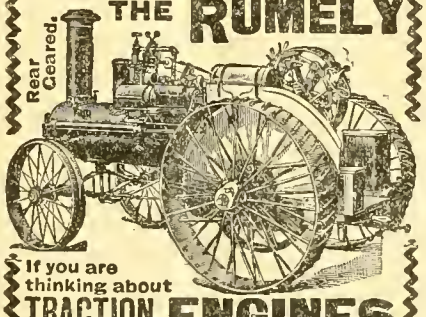
ELECTRIC HANDY WAGON.

Our free illustrated catalogue tells all about both and gives prices. Send for it.

ELECTRIC WHEEL CO. Box 10, Quincy, Ill.

Please mention Bee Journal when writing.

THE **RUMELY**



If you are thinking about

TRACTION ENGINES

We present "THE NEW RUMELY" which is the climax of 44 year's experience in engine building. Embodying all the best inventions of our own and many others. IT IS STRONG—SIMPLE—DURABLE AND EASILY OPERATED. But there is more to it—explained in detail in our new catalogue—FREE.

M. RUMELY CO., LAPORTE, IND.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & Co.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

BOSTON, Jan. 9.—Fancy white, 13@14c; A No. 1, 12c; No. 1, 11c; light amber, 9@10c; buckwheat, no call. Extracted, white Northern stock, 7@8c; Southern stock, 6@7c. Beeswax, 27c.

The demand for honey seems to have dropt out of sight during the holiday season, but now that is over we hope to see a better call for it. There is abundance of stock on hand and it now looks as if the expected shortage would not materialize. BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25. Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

BUFFALO, Jan. 27.—There is a little more activity on strictly fancy 1-lb. combs at 12c. The bulk of receipts of low grades sell at 10c. down to 7c., and in a few cases even less. A moderate amount can be sold every day. Extracted, 4@6c., according to quality.

BATTERSON & Co.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

A. V. BISHOP & Co.

Convention Notice.

Wisconsin.—The 15th annual meeting of the Wisconsin State Bee-Keepers' Association will be held Feb. 9 and 10, 1899, in Madison. Many experienced bee-keepers will be there. The following is a part of the program:

"What to do with Unfinisht Sections"—John Trimberger, of Clark Co.

"Working an Apiary for Comb Honey without Increase"—H. Lathrop, of Green Co.

"Short Cuts in Extracting Honey"—Frank Minnick, of Sauk Co.

"Handling and Shipping Extracted Honey"—G. W. Wilson, of Vernon Co.

"Selling Honey"—Gustav Gross, of Jefferson Co.

"Selling Comb Foundation"—Aug. Weiss, of Ontagamie Co.

"Advantage of Honey Exhibits"—Ed Ochsner, of Sauk Co.

"Cellar Wintering"—A. G. Wilson, of Vernon Co.

"Benefits in Attending Convention"—J. Hoffman, of Green Co.

"State Foul Brood Report"—N. E. France, of Grant Co.

"Future Prospects of Wisconsin Bee-Keeping"—F. Wilcox, of Juneau Co.

As many other State Societies will be in session the same week in Madison, there will be excursion rates to all who take receipts of their railroad tickets. F. WILCOX, Pres.

N. E. FRANCE, Sec., Platteville, Wis.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER 20 pages free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.
Please mention Bee Journal when writing.

☞ IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his
Bee-Keepers' Guide.
Liberal Discounts to the Trade.

Carloads of Bee-Hives

Sections, Shipping Cases, Comb Foundation, and EVERYTHING used in the bee-industry.

We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc.

Inter-State Manufacturing Co.
Hudson, St. Croix Co., Wis.
Please mention Bee Journal when writing.

IT WILL PAY YOU
TO ATTEND THE
Eclectic Shorthand
College

Headquarters of the Cross Eclectic System.
Lessons by mail a specialty.
Send stamp for alphabet.

94 Dearborn Street, CHICAGO.
39Aly Please mention the Bee Journal.

PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N. Y.
Please mention Bee Journal when writing.

SENT FREE
Our descriptive circular and price-list of
Bee-Hives, Italian Bees
Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. SEND FOR ONE.
Address, **F. A. SNELL,**
1A13t Milledgeville, Carroll Co., Ills.
Please mention Bee Journal when writing.

22nd Year **Dadant's Foundation.** 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because **IN 22 YEARS** there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss. PATENT WEED PROCESS SHEETING.**

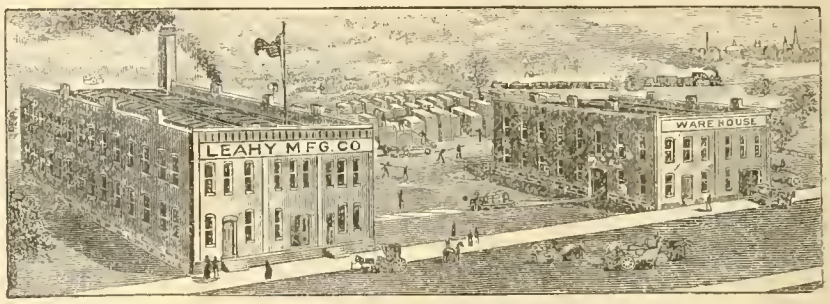
Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies of all Kinds.

Langstroth on the Honey-Bee—Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Please mention Bee Journal when writing. Hamilton, Hancock Co., Ill.



For Apiarian Supplies, Address,
LEAHY MFG. CO., Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Eastern Bee-Keepers!

Do you expect to buy anything in the line of Apiarian Supplies the coming year? If so, we would be pleased to hear from you as to what you want, and mail you our Catalog. As we keep

Several Carloads of Supplies

in stock, we can ship promptly, and our location insures you low freight rates and quick transportation.

OUR HIVES, SECTIONS, ETC.

are made in Wisconsin where lumber is cheap and the best can be obtained. We keep **Dadant's Weed Process Foundation** in stock.

SPECIAL PRICES ON LARGE ORDERS.

Our apiaries are located at our home, Glen Cove, L. I., from which we sell Bees and Queens during the season. We have several yards of pure-bred, white Wyandottes, which we have bred for eggs, not fancy points. They are great winter layers. If you are interested in POULTRY, we would like to quote you price on eggs for hatching. We guarantee fertile eggs.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

WESTERN FARMS.

A beautifully illustrated paper called "The Corn Belt" is published every month and contains a quantity of interesting information about the farm lands west of the Mississippi River. Pictures of all sorts of farm scenes in Iowa, Missouri and Nebraska. Personal experiences of farmers who went to those states from the East years ago. The handsomest farm paper published. Send 25 cents for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

Think of the Future. Don't Rent. Establish A Home of Your Own.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., FEBRUARY 9, 1899. No. 6.

The...Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

INTRODUCTION.

LINE upon line, precept upon precept," is the way to instruct. The effect of bee-medicine is much of it lost for want of somebody to come afterward and rub it in through the cuticle—and therefore here comes your humble servant to put you in mind of what you read several weeks ago. It's a peculiar job, tho, because different sorts of patients require different kinds of rubbing. The rubbing that would do nicely for chilblains or callousities might cause the gouty patient to knock you down with his crutch. And, then, the medicine suitable for colic might not be just the thing for insomnia; and in doctoring through the printing press we have to deal out the medicine to all, like an army ration. (All this will make you think it's Dr. Peiro that's starting in again; but of course shrewd judges will perceive that "Cogitator" is only another alias for the editor.)

THE PORTRAIT OF DOOLITTLE.

The first thing that strikes us in the new year is how different the portrait of Doolittle looks from all his previous pictures. Looks as if he had just been doing something naughty, and was inwardly chuckling about it. Cogitator thinks the multiplication of bee-men's pictures is getting to be a nuisance, very like the pictures of folks cured of something by somebody's dollar-a-bottle stuff. But this does not hit Doolittle at all. It is a high honor to be the foremost practical bee-man of the whole world; and we are more than willing to contemplate a new picture of our leader any time. The point suggested is this: Pictures of nobodies continually thrust before us obliterate from the mental retina the pictures of the somebodies which we would like to retain.

EVERYBODY HIS OWN QUEEN-REARER.

Doolittle's article says, "No person is an accomplisht apiarist until he is a thorough master of the queen-rearing part of the business." May be that's the truth; but it hits a lot of us unpleasantly hard—the happy-go-lucky way of letting our bees rear their own queens entirely comes so easy—easy as slumber to the sluggard. Mr. D. backs his unpleasant assertion by reminding us that when we happen to be favored with a queen of exceptionally valuable qualities we let a big prize go mainly to waste, just because it is too much bother to rear 50 young queens from her and introduce them.

No special value in a little frame on purpose for queen-rearing, and many disadvantages. Worth something to be told that by such competent authority. Have a good frame, and use it for queen-rearing same as for everything else.

One tiptop idea that needs rubbing in is, that nuclei with queens always build worker-comb; and combs with holes in them should be given to such for them to mend up. Strong colonies mend holes with drone-comb too often. When your "hole—y" combs give out, cut out your patches of drone-comb, and have it replaced by comb of worker size. The use of a little frame for nuclei blocks this excellent policy.

It also looks as if he was right in the rather extreme advice to use a full-sized hive for nuclei—no handy way yet devised to keep little hives from being robbed which is at all comparable to making the bees enter one side of a big hive, and then go across it to their compartment on the other side. Unless the nucleus is unreasonably weak, robbers will almost never overcome it if so arranged. Probably robbers soon come to distinguish diminutive hives from big ones, and assume that the former can *of course* be beaten if the attack is sharp enough, when they would let a big hive alone in the same circumstances; just as banditti attack a cabin, but keep clear of a fort. Beginners (and perhaps most of us) need a heroic dose of capsicum to wake us up to the magnitude of the robbing evils which a little forethought could prevent just as well as not.

ABOUT THOSE "AIKIN(G)" EXPERIMENTERS.

Well, how about Mr. Aikin's plan to get 20 apiarists to experiment simultaneously on problems of importance? Good; only I don't believe he half realizes the difficulty of arranging the details of the business. It is driving 20 horses in a team with a compound evener. Now and then one might fly back. And a trifle of kicking is possible, even.

Anon some will say: "I am doing a full share of the work of this, and somebody else is getting all the credit of it." And at last the results would not agree; and the unsolved problems would mostly remain unsolved. When the symposium method of question-box answers was first invented we were to have all unsettled things settled right away. How many were really settled? The problems mostly stay with us to the present day; and yet the plan was worth its page-room. The present plan is likely to be worth trying; but we must not expect too much of it.

Perhaps the best of the problems he suggests for such investigation is: When a colony stores 20 pounds of comb honey surplus, how much extracted surplus *would they* have stored? His present thought is, about 25. (I cheerfully second that figure.) Thinks he never once realized 40.

The question whether unqueening during harvest makes the bees less energetic in their storing, would do well for joint investigation also; but I doubt if much good would come of submitting the honey-wax ratio. Nineteen would find in accordance with previous prejudices; and the twentieth would find nothing beyond what has been found before.

Aikin says 25 pounds of surplus comb honey means 3

pounds of wax secreted. Seems to me he has got that more than twice as large as it should be. Cogitator himself thinks the current ratios should be hauled down a long way, and that a few hot shot thrown into them are seldom amiss; but let us beware of reckless overstatements. The conclusion that 25 pounds of comb honey *should* equal 90 pounds of extracted falls through if 20 pounds of comb honey contains only one pound of wax.

ON THE HIVE QUESTION, TAKE TO A TREE.

C. P. Dadant seems to think the 10-frame Langstroth hive a *small* hive. Most bee-folks began with that too-small hive: and, suspecting it sized wrongly, they jumpt from the frying pan into the fire by dropping to a still smaller one. If they had started in with the 10-frame Langstroth side by side with a really big hive, they would have changed up to the big one. Well, Cogitator is not prepared to dispute that, and still less prepared to assent to it; so to climb a friendly tree seems about the proper thing to do.

PLAYING WITH THE FOUL BROOD "FIRE."

It is sad when wise and good men advise little children to play with fire. Same when so good a man as McEvoy (page 6) encourages experienced bee-folks to put healthy colonies in foul-broody hives without disinfection. As often as he does it, some of us must protest vigorously. Just as good men as he encourage the children to play with the opposite kind of fire—teach that the danger is *all* in the hive and debris, and in the bodies of the bee, and that it's nonsense to fear contagion from the honey. (Scientific experiments cited to prove it.) Between the two we should have no protection at all against our great destroyer.

VIRILITY OF DRONES FROM DRONE-LAYING QUEENS OR LAYING WORKERS.

That Australian example on page 10 seems to prove that drones from a drone-laying queen are O. K., *if;* if only there were not *unknown* Italians living in freedom somewhere near. Cogitator also thinks that laying-worker drones are sometimes virile; but the evidence he has to offer would fall quite a bit short of complete proof.

ORIGIN OF HONEY-DEW "UP HIGHER."

Prof. Cook's leading idea, on page 17, may profitably be rubbed in a great deal (even if the patients do get mad and strike). It is the nature of the aphis to *select* the juiciest and most rapidly growing shoots and gather on these in immense numbers. These shoots on a tall tree are at the top, the whole tree from top to bottom being smeared with sweet from thence. The sophomore bee-naturalist climbs up into the tree half way, looks all around sharply, then comes down and reports that there are no sap-sucking insects on the tree, when the simple fact is that he did not climb high enough to see one. Notice the most common example—the grape aphis—and you'll see how it is at once—myriads on a few tender tips, few or none anywhere else. And these words about honey-dew, from the best scientific authority on this continent, deserve to be hung up in our minds, set in capitals, and perhaps sometimes displayed before the people:

"IT IS A SECRETION AND NOT AN EXCRETION."

That is to say, when it's good it's good, and when it's bad it's bad. The way in which it is sprayed around exposes it to admixture with various kinds of dirt; and fungi are sadly free to grow in and on it; but it is not *necessarily* vile, any more than milk is. (But the kind we had here last summer was *unnecessarily* vile).

HONEY FROM ITALIANS VS. THAT OF THE BLACKS.

Mr Bates, on page 19, makes some headway with the question, "Why Italian bees store better honey than the blacks." Now if some one will tell us, Why black bees store better honey than the Italians—why, then we'll have a mitten on each hand.

FASTENING BROOD FOUNDATION BY "CANDLE-LIGHT."

Mr. Thompson's way of setting foundation is ingenious, and also effective; but I suspect Dr. Miller, with the ordinary saw-cut bar, and his beeswax candle (or half a dozen of them) would securely put in about ten to his one.

THE UNCOMBINED THE BEST TOOLS.

Is it best, Mr. Bearden, to try to combine the hive-lever with the propolis-scraper? I doubt it just a little. We want the best lever and the best scraper; and combination tools proverbially fall short of the uncombined.

BEES FEEDING CAGED QUEENS.

Dr. Miller mostly rubs in his own medicine pretty well, and to have another doctor come around and tinker hardly sounds in accordance with the fitness of things. I'll venture, however, to rub a little more on his answer about bees feeding caged queens. I see no reason to doubt his conclusions; and it is of prime importance to remember that a normal colony will *sometimes* let them starve; and that a good, strong colony unqueened will always feed them. (Doolittle wants us all to be queen-breeders, you remember.)

WRONG ABOUT FACING HIVES.

Guess Ben Honnett is wrong when he says (page 22) that it is unimportant whether the hive faces east, west, north or south.

JOINT STOCK COMPANY A SMILE-PRODUCER.

I indulged a smile at that Colorado joint stock company, to be started on $160, mainly paid in truck. When it comes to cash expenses in securing a market, most bee-folks seem to think that apiculture is all the same as religion.

WOULD LIKE TO SEE THAT FIBER HONEY-PAIL.

That fiber pail, on page 23, that holds cold water indefinitely, and takes eight hours of hot water to soak its joints loose—well, I should like to see it. Would think it promising were it not for the one word—reliquefying.

KIND WORDS DON'T "BRUISE" HARD.

It is really good to hear, as we do on page 25, that the subscribers are treating our editor to an avalanche of kind words beyond all precedent. Send 'em on. Avalanches of that sort don't bruise a fellow badly enough to require arnica.

"BOILER'S" BAGGED BEES.

The one thing in "Beedom Boiled Down" which I will touch this time is the plan of transporting bees in a bag separate from hive and combs. It may take a long time to get all the details of this just right; but I am strongly impressed with the feeling that an important advance will sometime be made on this line. But many stubborn noddles will have to be trepanned first, to let in the fact that honey alone is not adequate food for bees. In the hive they chew cocoons, and lick out the dried larval food and excreta hidden between; but if bagged long, some corresponding food must be given. Cogitator has tried bagging bees, and discovered that after awhile they tear the dead bodies of their comrades apart, and suck the interior.

THE EDITOR "OFF HIS (HONEY)-BASE."

Probably our editor was a little off his base in intimating that a third of a section of honey, eaten as food, with only such other viands as fitted in nicely, was an unreasonable meal. But first be sure that your stomach fully tolerates honey. Some stomachs do not. And if the honey should be aught else than best quality (color not being quality in this case) go slow on it.

SALICYLIC ACID TO "SWEETEN" SOUR HONEY.

A. W. Hart, page 29, wants salicylic acid to put in his sour honey. Tut, tut! Unhealthy stuff. Feed it to the pigs (not the acid, but the honey), and ripen up your honey before you extract it next time. COGITATOR.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

CONTRIBUTED ARTICLES

Successful Bee-Keeping—Some of the Requisites

BY G. M. DOOLITTLE.

TO be successful, the bee-keeper must have a simple movable-frame hive of some kind, and for comb honey the brood-chamber should not contain more than from 1,800 to 2,000 cubic inches, inside the frames.

All know that bees gather honey instead of producing it, and that the eggs laid by the queen produce bees, consequently the more eggs the queen lays the more bees in the hive, and the more bees we have the more honey they gather. In fact, the queen is the producer of the honey. Therefore, if we wish good returns from our bees, we must see to it that we have good prolific queens, and that they fill the combs with brood before the honey season commences, so that when the honey harvest comes the bees will be obliged to place the honey in the section-boxes, as there will be nowhere else for them to store it.

But how shall we secure combs full of brood and plenty of bees to carry on the labors of the hive by the time our honey harvest begins? As soon as spring opens, our bees should be examined by lifting the frames of each hive, and if the colonies are weak, the bees are shut to one side of the hive by means of a division-board, so as to keep up the necessary heat for brood-rearing, on as few combs as they can cover. As soon as the queen has filled these with eggs, they are spread apart so as to insert an empty comb between those occupied with brood, and in a few days the queen will fill this also, and so we keep on until every available cell is occupied with brood.

Thus it will be seen that instead of the queen laying her eggs on the outside of the cluster, where it is comparatively cool and not so well suited for the youngest brood, she lays them in the center of the brood-nest, where it is the warmest of any place in the hive.

After the hive is filled with brood and bees, it does not make so much difference, as the weather is warm by this time, and bees are plenty, so that the queen can deposit her eggs anywhere in the hive to advantage. As soon as the strongest colonies are full, take a frame of brood just gnawing out, and place it in the weaker ones, giving the stronger one an empty comb for the queen to fill again, and so keep on till all are full.

When this is accomplisht put on the section-boxes, and as was said before, if any honey is gathered it must be put in the boxes. Each section should have a small piece of comb attacht to the top of it for a "starter," or be filled partly or fully with comb foundation of the thinnest make, to entice the bees to work more readily in them; while the center tier of sections should, if possible, be full of comb left over from the season previous. As soon as the first few sections are completed, they should be taken off before being colored by the bees traveling over them, and empty sections put in their places, thereby causing the bees to work with renewed vigor to fill the empty space left where the full sections were taken out; and thus keep taking full sections and putting in empty ones to take their places, as long as the honey season lasts.

But there is another thing which plays an important part in this matter, and that is a thorough knowledge of the location we are in. In nearly all localities where bees can be kept there are certain plants or trees which give a yield of nectar at a certain time of year, while aside from this there is little more honey obtained by the bees than is needed to supply their daily wants. Hence, it will be apparent to all that if such a flow of nectar, or honey-yield, passes by without any surplus, none can be obtained during the season. From this it will be seen that in order to be a successful bee-keeper a person must have a knowledge of the locality he is in, as well as to know how to secure the bees to meet that locality, if they are to succeed in the pursuit of bee-keeping.

Failing in this point there is no profit in apiculture. Here in central New York our honey crop comes mainly from basswood, which blooms from July 5 to July 15, and lasts from eight days to three weeks, according to the weather. In other localities in this State, white clover gives the main crop, coming in bloom June 15 to June 20, and again in others, buckwheat, yielding honey in August; but as nearly all have a yield of honey from basswood, let us speak of that as the harvest. Bear in mind, however, that it devolves on each bee-keeper to ascertain by careful watching just when and what is the source of his surplus honey crop, so as to work accordingly. After having determined just when we may expect our harvest of honey, then the thing to do is to secure the maximum amount of bees just in the right time for that harvest, doing it as has been given above.

If a farmer has a field of grain to cut he hires the laborers when the grain is ripe, not before or afterward, yet in keeping bees few give any attention to this matter, so that, as a rule, the bees are generally produced so as to become consumers rather than producers, and thus we often hear would-be bee-keepers complaining that bee-keeping does not pay.

To know how to bring the bees and the locality together, it should be understood that after the egg is laid by the queen, it takes three days for it to hatch into a larva. This larva is fed six days, during which time it has grown so as to fill the cell, when it is capt over and remains hid from view for 12 more days, when it emerges a perfect bee, making a period of 21 days from the egg to the perfect bee. This bee now works inside the hive for 16 days more, when it is ready to go outside of the hive as a field-laborer, and at 45 days from the time it emerged from the cell it dies of old age, and another generation takes its place. From the above it will be seen that the egg must be laid at least 37 days before the honey harvest, in order that our bee has an opportunity of laboring in that harvest to the best advantage.

Now, if the harvest is basswood, commencing to bloom say July 10, the egg for our laborer must be laid on or before June 3. In this way we can calculate on any bloom, so as to have our bees ready in time for any harvest.

Allow me to say that these two factors—securing the bees, and a knowledge of our location—have more to do with successful bee-keeping than all else connected with the pursuit.

Onondaga Co., N. Y.

Securing a Foul Brood Law in Illinois.

BY C. P. DADANT.

I WISH to call the attention of the Illinois readers of the American Bee Journal to the short report of Secretary Jas. A. Stone, on page 765 (1898), concerning the decision of the Illinois State Bee-Keepers' Association to make an effort to obtain a foul brood law in this State, such as is now in force in Canada, and such as has lately been past in Wisconsin, where Mr. N. E. France is foul brood inspector.

Whether such laws are necessary needs but little thought. The expense to the State of an inspector such as is provided for by the Wisconsin law is insignificant if the disease does not exist in general throughout the country. Foul brood, altho of rare occurrence, is one of the most malignant diseases that prey upon domesticated animals. This disease, known scientifically as "bacillus alvei," is a fungus which attacks the larvæ of the honey-bee, and causes them to die and decay in the cell with the most putrid and disgusting smell. It is contagious, and for this reason the existence of apiaries in the neighborhood of diseased colonies is threatened during the entire season, for it suffices for a bee to visit the inside of a hive which has been destroyed by this disease, to bring it home to its own colony. The larvæ dying before maturity, there is no reproduction of adult insects, and the colony is doomed. The combs, the honey, the queen, the bees nay, even the very walls of the hive are contaminated by the disease and made channels of infection.

There is one remedy, salicylic acid, which is successful where properly and thoroughly applied, but in most cases the safest and most rapid means of prevention of the spread of the disease is fire.

Past experience shows that when the disease once takes root in any part of the country it is likely to remain in a latent state, owing to the carelessness of some bee-owners who pay little attention to their bees. The late Chas. F. Muth, of Cincinnati, for years was compelled to fight this disease in his own apiary, owing to the neglect of neighboring apiaries. Just now the disease exists in very few parts of the country, and this is certainly the time when we can, with the very lowest cost, prevent its spreading, and destroy it from the face of the earth. Therefore such a law is timely.

But laws of this kind cannot be past by the isolated influence of a few individuals. It requires comined action. We therefore urge all Illinois bee-keepers who have an interest in the pursuit, and who appreciate what a scourge it would be, should this dread disease make its appearance in their vicinity, to write to the representative or senator of their district, and ask the extension of their vote to the bill which is about to be introduced.

I understand that Mr. J. Q. Smith, the genial president of the State assooiation, has been recommended for the State inspector. He is certainly well fitted for such work, which, I believe, will require but very little of his time at present. Better have such an appointment now than wait until the disease has made ravages among our apiaries.

I must say that, personally, I have never seen a case of foul brood, but it seems to me that I would become entirely disgusted with the pursuit if it ever struck our bees. That it is difficult to eradicate, when once establisht, is clear, and has been proven by all who have suffered in the past.

Friends of Illinois, do not let this subject drop out of your mind before you have done your share towards getting our law-makers to help us in this matter.

Hancock Co., Ill.

[See editorial columns for further reference to this subject.—EDITOR.]

Pickled Brood: Its Origin and Prevention—Cellaring Bees.

BY DR. C. C. MILLER.

SOME time ago Miss Fannie C. Damon, of Massachusetts, wrote me about her bees, which were badly diseased. I referred her to Dr. Wm. R. Howard, to whom she sent samples of the dead bees, and he decided it was a case of pickled brood. Some points obtained from him are of general interest.

The disease is in the old pollen. If you want to keep clear of the disease, don't use moldy combs or old pollen. A 10 percent water solution of salicylate of soda will destroy the spores of the mold if it comes in contact with them, but if any bee-bread be present, the application will be useless so far as the bee-bread is concerned. When fresh honey and pollen are coming in, the disease usually subsides. Freezing will not affect the fungi.

Dr. Howard's observation is that old bees as well as young consume pollen at all times, more or less of it being consumed in winter. In all the years that he has been dissecting bees, he has never found an adult bee without pollen in the alimentary canal. Queens are also consumers of pollen.

The disease appears to be epidemic some seasons; the seasons and resulting conditions having much to do with its spread. Inferior food may have much to do with it, especially if pollen is rained on every day. If fresh pollen is lacking, sterilized (baked?) rye-meal or flour may be fed.

The disease will not be conveyed to the brood unless fed in the pollen or water. It must be fed to it. Old as well as young bees must have pollen to be furnisht their normal food, and the absence of it changes materially the quality of the food.

Miss Damon is somewhat puzzled to reconcile matters, as she says she has not a comb in the apiary in which mold was visible to the naked eye, and while her apiary is almost ruined, one within a mile of her and another within two miles are entirely healthy, altho she thinks they must have gathered some of the same pollen.

IS IT BAD TO CELLAR BEES WITHOUT A FLIGHT AFTER MOVING?

DR. MILLER: If I understand you correctly, you teach that it is very important to allow bees to have a flight after hauling, before putting them into the cellar. On page 16, C. Davenport tells about 10 colonies that were hauled from an out-yard and put into the cellar apparently without a flight in the middle of the winter, all but one wintering well. I think others have also said it was not necessary that bees should have a flight after they have been hauled before being put in the cellar. Which is right? NORTHERNER.

Perhaps neither. A rather costly experience has made me hold strongly to the view that a flight is important. One winter part of the bees in one of my out-apiaries were brought home late and did not have a flight before going into the cellar. The loss in this lot was very heavy, while the other bees in the same cellar wintered well. I know of no reason why the mortality was greater among those cellared without a flight except that one item, as in all other respects conditions were the same so far as I know. So I feel pretty safe in saying that in that case cellaring bees without a flight after moving was a bad thing.

But Mr. Davenport says he moved bees and put them into the cellar without a flight, and they wintered well. Others have said the same thing. Evidently cellaring moved bees without a flight is not in all cases so bad a thing as I have believed. The question is whether it just happened that my case was different, or was there some difference in conditions to account for the different result? I am inclined to take the latter view. My bees were hauled when it was not very cold weather, altho too cold for them to fly, and they were probably as much frightened and excited by the journey as if the weather had been a good deal warmer.

I think those who report good success in wintering bees that were cellared without a flight after being hauled, in each case moved their bees in very cold weather (evidently Mr. Davenport did), and at that time it may be that the bees would not become so much excited as in a warmer time. Possibly they may also have been moved very quietly in a sleigh, while mine were hauled over hard roads (not very rough) in a wagon.

It is quite possible I have been wrong in thinking it did so much harm to put bees directly into the cellar after being moved in the middle of winter. But it would take considerable money to hire me deliberately to put my bees into the cellar without a flight after being hauled in the fall.

McHenry Co., Ill.

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 70.]

WHEN TO REQUEEN BEES.

QUESTION—What time is the best to requeen a colony?

H. Rauchfuss—We need to know what object is to be accomplisht by requeening.

L. H. Northrup—I askt the question. I wish to change the character of my bees, and get a better grade.

H. Rauchfuss—Do not requeen until you can get good queens cheap. Then if increase is not wanted, introduce young queens just before swarming-time. By so doing you accomplish two objects. I did this with 40 colonies, and not one swarmed.

Mr. Martin—The most convenient time is during the swarming season, because the bees accept strange queens better then. If you have a large number to requeen, I would not buy, but get a choice queen and requeen during swarming-time.

Mr. Foster—For 15 or 20 colonies, I would requeen from the best colony as early in the swarming season as possible. For only two or three colonies I would buy queens.

Mr. Gill—Whenever a colony is poor, I would requeen any time, tho I would not interrupt them in the spring. But I would especially do so in the swarming season, choosing the prime cells for that purpose.

S. M. Carlzen—I had a queen that laid drone-eggs in the spring. If I had bought another queen early, I could have obtained three supers from that colony. By letting it go I got only one super.

USUAL AMOUNT OF HONEY TO A COLONY.

QUESTION—What is the usual amount of honey to a colony?

F. Rauchfuss—Probably the usual amount of surplus is meant.

Mr. Gill—In Wisconsin, my average for a term of 18 years was 110 pounds of extracted honey, including two years of failure. On the Western Slope, my average in comb honey has been 40 pounds; one year it was 90 pounds. This year, the grasshoppers cleaned everything out, and my bees lackt 10 pounds of anything. From one apiary of 240 colonies outside I obtained 400 cases. Perhaps the general average of the Western Slope is 50 pounds. What has it been over the State?

Mr. Adams—My average has been very little, ranging from 10 to 134 pounds—the total average being 40 or 50 pounds.

F. Rauchfuss—12½ pounds was the average surplus of Colorado last year, and it was an average season. Only practical bee-keepers will obtain the results mentioned by those who have answered the question. Many colonies kept by farmers and others do not yield anything, which reduces the general average.

H. Rauchfuss—Last fall I was requested to take off the surplus from a yard of 36 colonies. I obtained a total of three unfinisht sections.

F. Rauchfuss—The yield is largely due to management. The highest average reported last year was 118 pounds. Some colonies in that man's neighborhood yielded nothing; many not a quarter as much.

Mr. Rhodes—I know the man. A number of apiaries in that neighborhood did not produce a pound. The average per colony must be very low.

BEST WAY TO STOP ROBBING.

QUESTION—What do you consider the best way to stop robbing?

A lengthy discussion ensued. The method of contracting the entrance, closing with a bunch of grass, and sprinkling with water at intervals of one or two hours was advised; also, that of trapping the robbers by an inverted shipping-case on top, and letting them go at night. These methods were criticised as being suited to well-dispositioned bees, but not generally successful. The advice was also given to drive out all the bees with smoke, and close the hive up, as a colony that is robbed is not worth much, being weak or queenless. To this it was replied that it was not good policy to close up a hive that is being robbed, as in two or three minutes the robbers will attack neighboring hives, and that it was better to leave a small quantity of honey and let them clean it out. This was in turn criticised as being dangerous advice to give to the shiftless bee-keeper near Boulder, and not good for the small bee-keeper, as it educates bees to rob. The best method is to remove the cause. Weak or queenless colonies, or those having combs broken down, are the ones usually robbed by the thrifty colonies. A lot of extracting-supers exposed will cause robbing, and sometimes supers above bee-escapes. It is contagious, and very hard to stop after getting fairly started. In small cases, when the bees are not on a regular rampage, a change of position, or a wet blanket, will do good.

EVENING SESSION.

Miss Mary C. Porter read a paper entitled,

Extracting Honey.

It is not my intention to give any prescribed rules for honey-extracting, for every bee-keeper has his individual way. The underlying principle is that by centrifugal force the honey is thrown out of the comb.

Extracted honey seems to me to be a more useful and attractive as well as more concentrated form of honey, from the absence of wax. For this reason it may be put to many uses unsuitable to comb honey.

The machine used, called an extractor, consists of a cylinder in which a wire basket is hung, of such a shape that the extracting-combs may be easily rested therein. The first extractor we used had room for but two frames, and these were lifted out and turned; but for two seasons we have used a "Cowan Improved," which holds four frames, and these turn automatically, saving much time, tho requiring more strength to propel it.

Perhaps the best way to tell you how we extract is to describe a day in the honey-field. To do a day's work one must rise early and be in the field—on a sunny day—by 9 o'clock. The first thing for us, as our yards are all some distance from home, is to load. We carry extractor, capping-box, knives, tools of other kinds, a small oil-stove, smokers, and our lunches, for we have a whole day's work before us, and the out-door work produces a wonderful appetite.

Our force consists of four persons, two to take the honey from the hives and carry in, two in the shop to uncap and extract. Arriving at the field of action the smokers and stove are lighted, water to heat the knives is heated (by the way, this water is excellent to make honey-vinegar), the extractor and capping-box are set up, and then we are ready.

When the honey is well capt over, two experienced persons are required to uncap, and even then the extractor is not run to its fullest capacity. Now the capping-box: Ours is a water-tight box in which are suspended two deep sieves. These are hung within three inches of the bottom, and on a good day, at noon, about 30 pounds of good, clear honey are drawn off. The comb rests across the box lengthwise of the sieve, and we find it a great improvement over the can with a board across it, which we formerly used; the cappings drain so well, and so much honey is saved which would otherwise be greatly darkened by the solar extractor.

The honey having been uncapt, the frames are carefully scraped, which we find a great advantage in using the Cowan extractor, as otherwise the bur-combs, propolis, etc., make the baskets gummy, and greatly hinder the work. Then in storing is it not much better to put away clean, well-scraped combs and frames than those covered with a season's wax, propolis and bur-combs?

The next step is extracting proper, which, if the honey is at the proper temperature, is very easily accomplisht. The person who extracts soon learns from experience about how much turning each set of combs requires, how to balance the combs to prevent undue jarring of the machine, and subsequent loss of combs, and how fast to run the machine to make all the honey fly out.

When the honey comes from the extractor, it contains particles of wax and candied honey, which must be removed. To accomplish this we have found a wire strainer very useful. The wire is about 32 mesh, and the honey passes through very easily, leaving candied honey, wax and bits of comb behind.

One thing that should be remembered by every bee-keeper, is that the honey-house should be kept neat and clean, and handy—that is, have all things in order, with a place for everything, and everything in its place.

Another year may we all be successful, and succeed in producing a good crop of the finest honey.

MARY C. PORTER.

Mr. Pease—Don't small bits of wax go through the strainer?

Miss Porter—We do not find it so.

F. Rauchfuss—Don't you re-strain when liquefying?

Miss Porter—Yes, and then we use a much finer strainer, an 80 mesh.

Mr. Porter—Couldn't the Cowan extractor be improved?

F. Rauchfuss—I saw a ball-bearing Cowan at the Omaha Exposition. A brake would be an improvement.

Mr. Martin—The Cowan is not geared high enough.

F. Rauchfuss—I reported to the Root Co. a year ago about that. I did not examine the gearing of the extractor at Omaha. I have had experience with low gearing with an extractor three feet in diameter. It would not throw out satisfactorily.

Pres. Aikin—How many have had experience in extracting in November?

Mr. Pease—I have, and I don't want any more of it.

Mr. Porter—Three years ago I extracted sections in November by using artificial heat.

Pres. Aikin—I have been planning to have enough extra extracting-supers to hold the entire crop, so that I can store it all in a building in the comb. I would go to the out-apiaries in the morning and come home with a load of honey. It is not hard to smoke bees out if there is a chamber beneath for them to run into. I would have a room equipt for heating on the second floor, closed and tight, the heat being generated in the basement. I have found that for late extracting the temperature must be high, and kept there 24 or 36 hours, and the last three or four hours it should be close to 100 degrees. I would take one case out of the room at a time and extract it, letting the honey run into a tank in the room below. The worst difficulty is with honey candying; but the plan does save lots of labor in the busy season. I cannot make a definite report of the plan. It is largely yet in the experimental stage. The basement might be built so a team and load of honey could drive right in, and a few extracting-supers at a time loaded on a simple elevator, and pulled above.

Mr. Porter—In using escapes, I had one clogged by one bee, and all the bees in that extracting-super were dead.

Pres. Aikin—I wouldn't trust the Porter escape. I would have a little room at each apiary, with a wire-screen window-escape, where the supers would be carried in from the hives and allowed to remain a short time before loading on the wagon. Two persons can take off a ton of honey in a few minutes. I would do no shaking of combs. Sometimes the outside bees will find their way in through a screen escape. In that case I would extend it up a consid able distance, or use a double one.

Mr. Porter—I had a screen escape outside, which was entered and clogged up by robbers.

Pres. Aikin—I would not use a cone, but two sheets, with an opening clear across the window. That plan keeps outside bees from going in, and inside bees from passing honey out. When the opening is extended, the bees will not cluster. Where they cluster robbers cluster also, and find their way in.

THE RIETSCHE FOUNDATION PRESS.

I have here a machine for making foundation by means of melted wax. Having had an argument with the editor of Gleanings on whether this machine was practical or not, he offered to pay the transportation charges if I would pay the actual cost. I did so, paying $5.50. As near as I can make out, the transportation from Germany to New York was $5.50, the duty $3.50, and the expressage from New York to Denver $2.50; or a total of $17, if a bee-keeper there would buy one out and out. Consequently, it could only benefit bee-keepers in general by being manufactured in this country. That could be done, if they would take enough interest in it. In Europe, 14,000 of these presses are in use.

To use, the press is set on a level table, and the vessel containing the melted wax within easy reach on a stove on the right hand. A vessel containing the lubricant sets on the table behind the press. I used soap-suds. With the left hand the press is opened, and enough lubricant poured in to merely fill the press, when it is closed again. The lubricant is then poured back, opening the press slightly at the same time, so that both plates may drain thoroughly. The press being replaced in position, the left hand opens it a little over half way, while the right hand dashes in a dipper of melted wax, taking care to cover at least half of the surface on the side away from the operator. The press is then instantly closed. No particular pressure is necessary, as the wax at once solidifies. The forefingers then slightly raise the ball-and-socket attachments of the upper plate, while the thumbs press down on the lower one. The upper plate is then grasped by the wooden bar attacht to it in the middle, lifted off, inverted, and the sheet trimmed while still on the plate. (If rightly done, the sheet remains attacht to the upper plate when this is lifted off.) The plate is then held over where the pile of foundation is wanted, and again turned over, when it either peels off itself, or comes off with a very little assistance.

I made about 200 sheets last summer, and calculated the weight and area of 179. I figured that the foundation ran almost five square feet to the pound. When the work was progressing smoothly, I made a sheet every minute and a half without hurrying. But I did not become at all skilled in the use of the machine, and no doubt an expert could work it much faster.

To show what other English-speaking bee-keepers think of it, I will read some extracts from the Australian Bee-Bulletin. The question was askt, "Can any bee-keepers give their experience with the foundation wax-press?" "Gippslander" replies:

"Yes, we get on all right with one. If your wax sticks wash it well with strong soda water, and use plenty of honey-water. It makes the foundation rather thick, that's the only fault." "Australian Yankee" says: "Not a success in my hands." John Thacker answers: "If you refer to the Rietsche press, we have used them for three seasons, and find them invaluable. Difficult to use while new, but better afterwards. Foundation thicker. We find it better for bedding the wires." W. L. Davey replies: "Yes. I wasted about a week practicing on a Rietsche foundation press before I got into full working order. So far I have attained a speed equal to 50 pounds a day, or six pounds an hour. Sometimes the foundation comb is a trifle thick, but I prefer the press-made article, as the cells stand out *much further* and more truly than the mill-made. Get a sheet of each and compare them, and you'll be convinced."

Samples of the foundation are here on the table. The heavy foundation which Prof. Gillette refers to in his experiments was made on this press.

Mr. Elliott and Mr. F. Rauchfuss have also tested this press, and I will leave it to them to supply any points I have omitted. F. L. THOMPSON.

Mr. Elliott—The machine would be practical here if it could be obtained for $5 to $10. By means of it, when one has only five pounds of wax he can work it all up, and it is not necessary to strain it, either; any kind of dark wax can be used. I found no trouble in rapid work; I turned out sheets at the rate of a minute and a half apiece.

Mr. Porter—What temperature should the wax be?

Mr. Elliott—Pretty warm—so as to make the press as hot as can be borne by the hand. I have had considerable experience with rolls. Comparing the work of both machines, this is the machine for the average bee-keeper. It takes lots of wax to work the rolls at all, and it must be purified, and kept at an exact temperature.

Mr. Martin—Is there any advantage in pressing the plates?

Mr. Elliott—No. Perhaps a little. But just a quick movement in pouring in the wax will thin it.

Mr. Martin—Is it not possible to have the plates come very close together, for surplus foundation?

Mr. Elliott—Not for surplus.

Mr. Pease—Couldn't sheets of dipt wax be used in that machine?

Mr. Thompson—It is not generally done, but I have read of one case. A bee-keeper in Italy employs a press about like this for dipt sheets, tho that press, too, is intended only for melted wax. He uses a bottle of ice-water for dipping, so as to get thin sheets.

Mr. Foster—Is any special style of dipper used to pour in the wax?

Mr. Thompson—No, just an ordinary dipper.

Mr. Foster—My brother, Oliver Foster, used to make plaster-of-paris presses for sale, using a sheet of thin foundation for a pattern. They did not last long, but they were cheap. He used a special dipper, so as to get the wax on the lower plate instantaneously. It was a tin tube with a row of holes along one side. When this was held over the plate, and turned around, the wax would all fall down at once.

Mr. Elliott—If plenty of wax is put on, it is all right. The excess is poured off.

Pres. Aikin—I should think if you got the temperature too high, the wax would stick. Wax just above the melting point poured on a board can be readily removed, but hot wax cannot.

Mr. Thompson—It does. The temperature must not exceed a certain point, which is when the machine does not get too hot to be comfortably handled.

F. Rauchfuss—From some points in the State the freight on wax is 2½ cents a pound to Denver. Supposing 22½ cents a pound is obtained, that makes the net return 20 cents a pound, for which less than 20 cents' worth of foundation may be bought, for the freight on the foundation is also 2½ cents, making the expense 5 cents for every pound of wax. The expense of rolls, therefore, is not the only item to be considered.

Pres. Aikin—In making foundation by rolls, one must have a large amount of wax melted, in tanks. In the dipping process, there is a great deal in getting the boards and wax at the proper temperature. It is a trade that not one man out of ten will be successful in. I use the Vandervort mill. I believe a low side-wall will give a thinner base when thinned by the bees.

Mr. Foster—Dadants' foundation is prest until it is transparent.

Pres. Aikin—We can't manufacture foundation prest as hard as theirs.

Mr. Foster—Some have said that it is prest too hard, and that Oliver Foster's home-made foundation is better.

Pres. Aikin—Perhaps the high pressure makes it too hard for the bees to manipulate. There is one point that has not been made prominent enough. The grain in a bar of iron made by rolling runs lengthwise. It is hard to break a bar of iron crosswise. Pound it, and it will break into strings. The same principles are embodied in foundation. I once put two pieces of foundation edge to edge, with the side-walls of one at right angles to the side-walls of the other, welded them together, and then by means of two clamps pulled the resulting piece in two. The piece which ran the direction that rolling would make weaker, when the pull was applied where it was, broke first. And yet the Dadants put out sheets which will not hang the long way of the grain. The Roots, too, say the side-walls should hang perpendicularly. So this is something even the Roots and Dadants haven't got hold of. Both the side-walls and the grain should hang vertically.

Mr. Porter—I have noticed a curve in the Weed foundation. When two pieces are put in one section, one curves away from the other.

F. Rauchfuss—The Weed foundation has more inclination to crack lengthwise than that made by the old process. It is more brittle, there is no doubt of it, tho the contrary is claimed. For surplus foundation, I could not see an advantage in the Weed foundation over the old process founda-

tion. I have not seen the equal of the Van Deusen flat-bottom foundation yet for surplus foundation.

Pres. Aikin—I have had no trouble with foundation melting down, except when it is extremely hot.

Mr. Pease—Do you use full sheets or starters?

Pres. Aikin—Both. I start with full sheets and finish with starters. Quite a few agree with me that drone-comb looks just as well as worker-comb.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Using Fence-Separators with Scallopt Sections.

Can I use fence-separators with 7-to-the-foot scallopt sections in Simplicity-Langstroth supers? I want to use no-bee-way sections and fence-separators next season, but I have a stock of 7-to-the-foot scallopt sections on hand which I want to use first. If the fence is too thick or too thin the sections would not stand as they should on the section-holder bottoms. MINNESOTA.

ANSWER.—If you get fences proper to use with plain (no-bee-way) sections, you can use them with your scallopt sections this year, only it will make the comb in your sections thicker and heavier than with plain separators, at least a quarter of an inch thicker.

Styles of Hives Most in Use.

1. Which are the principal styles of bee-hives most in use in the United States and Canada? and what are the dimensions of the respective frames?

2. Has the improved, double-wall American bee-hive any merits? KANSAS.

ANSWERS.—1. Probably no frame is so generally used as the one 17⅝ inches in length and 9⅛ in depth, outside measure. Of the styles of hive in which the frame is used, none is perhaps more popular than the dovetailed.

2. It would be hard to find a hive without merit in any direction, but I have no acquaintance with the particular hive you mention.

The Miller Feeder—Mammoth Red Clover—Preserving Extracting-Combs from the Moth.

1. Please describe as nearly as you can how the Miller bee-feeder is made.

2. Is the mammoth red clover a good honey-plant? and will it blossom late in the fall?

3. How is the best way to preserve extracting-combs from bee-moths when not in use? MINNESOTA.

ANSWERS.—1. You can make one of any dimensions, only so you get the principle right. I think if I had a new lot to make, I should make them in this way:

Make a box water-tight the same width as the hive, about 1½ inches shorter, and about 5 inches deep. The depth, however, is not important. Cut down one end at the top, or rather make it in the first place so that it shall not come up as high as the other three sides by about ⅜ of an inch. Now at this same end nail on the end at each corner a block 5 inches long (if that's the depth of your feeder,) ⅞ wide and ⅜ thick. Then nail on this another outside end. If your feeder is for an 8-frame hive, this end will probably be 13⅞x5. Now you have two walls at that end of your hive, and at the same end you need a third, inside, and ⅜-inch distant from the adjacent wall. Make that wall to come to the top, but it must not be so tight at the bottom that water will not leak through. Perhaps you'd better let it come within 1-16 of an inch of the bottom. Less would do, only there's a possibility it might swell enough to be water-tight. Make it, however, water-tight at the sides. Now you have three apartments in your feeder; the main apartment that occupies nearly all the room, adjoining it an apartment ⅜-inch wide, and an apartment outside that is ⅜ wide, only this last apartment has no bottom, and through this last apartment the bees can go up, and then down into the other small apartment into which the feed has leakt, or where it will leak after the feeder is filled. To confine the bees in their proper place, a cover of ¼-inch stuff is dropt in to cover the two narrow apartments, stops being placed so it will go down just enough to be flush with the upper part of the feeder.

Put your feeder on the hive with the end where the bees go up a little lower than the other. Put into the feeder the dry granulated sugar, dish out a little place in the center and fill the disht place half full of water and let it stand two or three minutes; then pour in more water, so there will be about as much water as sugar. If you pour in the water at first without any precaution, some of it may run right through into the other side and have so little sweet in it that the bees will not readily take it. If you have flat covers, the hive-cover will be all right to cover your feeder. Otherwise you must make a cover that will do.

2. Excellent for bumble-bees, and I think some claim that hive-bees can do more on it than on the other red clover. It blossoms at the same time as the other.

3. At a time when moths are flying, the best place is in care of the bees, putting a hive full of combs under a colony. Indeed, a colony can take care of two or three hives full of combs. Before freezing weather comes the hives of combs can be taken away and piled up out-doors, covering up from the rain and making mouse-tight.

Transferring—A Perennial Question.

I have one swarm in a box-hive. How would be the best way to get them into a movable 10-frame hive? MISSOURI.

ANSWER.—That's one of the standard questions that you'll find answered in any good text-book on bee-keeping. I cannot too strongly urge those who have no text-book to secure one as soon as possible, and then become thoroughly familiar with it. Every now and then some one gets a book and reads it so little or so carelessly that when the need comes suddenly upon him he asks a question that he would find fully answered in his book if he had only been more familiar with it. After you've studied all there is in the books you'll still find plenty of things to ask about that will more than fill this department.

Daisy Fastener and T Tins.

1. What are the dimensions of the daisy foundation fastener?

2. How long should T tins be for a 10-frame Langstroth hive super?

3. Please explain how T tins are fastened in a super so they can be removed and cleaned? NEW YORK.

ANSWERS.—1. Three feet long, 5¼ inches wide.

2. I don't know certainly, but probably 14¾ or 15 inches; 12 inches is the length of T tins used for 8-frame hives.

3. They are not fastened at all. They simply rest on bent staples that support them. When the super is turned upside down, its entire contents can be pusht out, sections, T tins and separators.

Hives Without Shade—Sowing for Bees.

1. Can bees, kept in single-walled hives, painted white, remain during the summer at a place without any shade-trees? What is your advice?

2. I have about an acre of ground which I would like to sow for bee-pasture. What seed is the most advisable? ILLINOIS.

ANSWERS.—Yes, they may do very well. I should want the shade more for the comfort of the bee-keeper than for that of the bees. It makes a difference whether there is a free circulation of air or not. One year I had combs melt down in a hive under trees where the sun never shone. Dense shrubbery on one side and standing corn on the other effectually prevented free circulation of the air. They would have been better off out in the glare of the sun with nothing to stop the breezes from reaching them.

2. If the chief object is honey, I should say sweet clover, especially if your stock has learned to like it.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Afterthought is the heading of a new department begun in this number of the American Bee Journal, in charge of "Cogitator." It will probably appear monthly. The idea is to keep up a running comment on what has recently appeared in these columns—to correct errors—to endorse or comment where deserved. Of course, everything that appears in the Bee Journal cannot be toucht upon by the "afterthinker," but doubtless the principal things will be "thought after." We believe the new department will be greatly appreciated and enjoyed by all our readers—even by the one who indulges so freely in the cogitations.

To Our Foreign Subscribers.—There are a few things that we would like to have our foreign subscribers remember. First, that *none* of our offers or advertisements in this journal, or any other, apply to any one outside of the United States, Canada and Mexico. This is because of the extra postage that is required to reach all other countries outside of the three mentioned. The price of the Bee Journal to foreign countries is $1.50 a year, so when a foreigner sends us $1.00 he will get this journal just eight months.

Again, we discontinue foreign subscriptions promptly at the expiration of the time paid for, as indicated by the month on the wrapper-label of each copy of the Bee Journal. Your subscription is paid to the *end* of the month given on the label. If it is "Dec'99" that means that your subscription is paid to the end of next December.

We hope our foreign readers will remember what we have said here, and thus save both themselves and us needless trouble.

Politico-Economical Discussions in Bee-Papers, in the estimation of Editor Hutchinson, of the Bee-Keepers' Review, are not desirable things, and yet he has found it easier to let such things get started than to stop them once they are started. One man blamed facing honey for lowering prices, another laid it to something else, another had views a little different, and so a discussion got under full headway that belonged more properly in some paper *not* devoted to bee-culture, only to be stopt after several pages had been used in a way hardly desired by the average bee-keeper: and when the discussion was stopt it was probably with less satisfaction to the disputants than if it had been nipt in the bud. All things considered, probably the best time to stop such discussions is before they get started—but it takes a wise man to foresee always to what end a beginning may lead. We know, for we've "been there," and weren't always "wise," even if our name does come under the "Y's."

Alfalfa—the great fodder and honey-plant of the West—was the subject of an illustrated article in the Chicago Daily News of Dec. 30, 1898. It said that to the Spaniard belonged the credit of having introduced this plant into the New World. It came to them from the Moors, who brought it, together with their patient skill in irrigation, from Africa when they crost to Spain. The Spaniard in his turn carried the seed to South America, Mexico, and later to California, and from there its culture spread over the West. Alfalfa may be grown over at least one-fourth of the territory of the United States with profit and advantage—nearly all over the far West, and along the sandy stretches of New Jersey and North Carolina, and even Canada, which now seem incapable of supporting vegetation may, where the lands are thoroughly drained, become valuable fields when seeded to alfalfa. Perhaps in Utah, Colorado, New Mexico and Arizona alfalfa does its best along the honey-yielding line. The best grades of alfalfa honey are hard to excel.

Illinois Foul Brood Bill.—Jas. A. Stone, Secretary of the Illinois State Bee-Keepers' Association, has sent us a copy of the Bill offered in the Illinois Legislature for the suppression of foul brood. It is House Bill No. 103, introduced by Representative Kumler, of Sangamon county, and reads as follows:

AN ACT FOR THE SUPPRESSION OF FOUL BROOD AMONG BEES IN ILLINOIS.

SEC. 1.—Be it enacted by the people of the State of Illinois represented in the General Assembly—that upon the recommendation of a majority vote of the members of the Illinois State Bee-Keepers' Association, the governor shall appoint for the term of two years, a State inspector of apiaries, who shall, if required, produce a certificate from the governor, that he has been so appointed.

DUTIES.

SEC. 2.—The inspector shall, when notified, examine all reported apiaries, and all others in the same locality not reported, and ascertain whether or not the disease known as foul brood exists in such apiaries; and if satisfied of the existence of foul brood, he shall give the owners or caretakers of the diseased apiaries full instructions how to treat said cases as in the inspector's judgment seems best.

DESTRUCTION OF BEES.

SEC. 3. The inspector, who shall be the sole judge, shall visit all diseased apiaries a second time, and if need be burn all colonies of bees, and combs that he may find not cured of foul brood; and for colonies so burned by the inspector, the owner thereof shall be paid not to exceed three dollars for each colony of Italian bees or hybrids, and not to exceed two dollars for each colony of black bees; to be paid the same as other expenses herein provided for.

VIOLATIONS.

SEC. 4. If the owner of a diseased apiary, or appliances, shall sell, barter, or give away, any bees, honey, or

appliances, or expose other bees to the danger of said disease, or refuse to allow said inspector to inspect such apiary, honey, or appliances, said owner shall, on conviction before a justice of the peace, he liable to a fine of not less than fifty dollars ($50), nor more than one hundred dollars ($100), or not less than one month's imprisonment in the county jail, nor more than two months' imprisonment.

ANNUAL REPORT.

SEC. 5.—The inspector of apiaries shall make an annual report to the governor of Illinois, giving the number of apiaries visited, the number of diseased apiaries found, the number of colonies treated; also the number of colonies destroyed by fire, and his expenses.

EXPENSES.

SEC. 6.—There is hereby appropriated out of any moneys in the State treasury, not otherwise appropriated, a sum not exceeding seven hundered dollars ($700) per year, for the suppression of foul brood among bees in Illinois. Said inspector shall receive four dollars ($4.00) per day, and traveling expenses for actual time served, which sum shall not exceed the moneys hereby appropriated, to be paid by the State treasurer upon warrants drawn and approved by the governor.

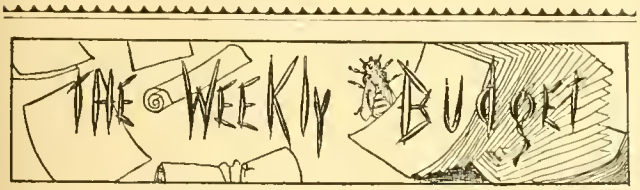
SEC. 7.—This Act shall take effect, and be in force, from and after its passage and publication.

Mr. Stone, when sending us the foregoing copy of the proposed law, added these words, that Illinois bee-keepers should heed:

If bee-keepers who know the harm of foul brood wish a law to protect them against it, let them write to, and talk with, their representatives and senators (as we will have the same Bill before the Senate), for there is no Bill that goes through without work, especially that has an appropriation attacht. If our bee-keepers' executive committee comes before the appropriation committees of the House and Senate, and none of them have been approacht by their constituency, our work will be hard, and probably a failure. If it is worth having, it is worth working for.

Disinfecting Foul-Broody Honey.—Mr. J. B. Adams, Bee-Inspector for Boulder Co., Colo., uses the following method for disinfecting foul-broody honey for feeding back:

"Boil the honey hard for 20 minutes after adding $\frac{1}{3}$ water. Let it get cold, and then boil again for 20 minutes. Foul brood spores have two skins; the first boiling and cooling loosens the first skin; the second boiling and cooling kills the spores."



THE G. B. LEWIS CO., of Watertown, Wis., have issued a very neat 1899 catalog of their apiarian supplies. They are one of the very best concerns in all this country. Wisconsin seems to be noted for its bee-supply firms. And, so far as we know, they are all good ones, too.

* * * * *

MR. GEO. SPITLER, of Crawford Co., Pa., speaks thus of this journal:

"Say, do you know that the American Bee Journal is fine? The last number (Jan. 12) is just full of good things—so much really original matter."

* * * * *

DR. PEIRO, whose office is in Central Music Hall, in this city, makes a specialty of throat and lung diseases. Any of our readers may feel free to consult him by mail, not forgetting to enclose stamps, of course. He has what is called the American oxygen treatment for lung trouble that he claims is a fine specific for la grippe and similar troubles. Just write him for his circular on the oxygen treatment, and mention the American Bee Journal. Don't be afraid to write him fully concerning yourself, if you wish.

DR. J. P. H. BROWN, of Richmond Co., Ga., wrote us Jan. 20:

"I am just getting over the la grippe—have had a hard time of it. The past season has been an 'off' one for the busy bee. I don't think 2,000 pounds of honey, all told, have been taken inside of a radius of 100 miles of this place. Result: Hundreds of colonies will 'go up' before next spring, unless fed. In fact, the loss already has been very heavy."

We are glad to know that our good Southern friend is all right again. La grippe is a terrible enemy to human health and happiness. We are just now (Jan. 23) suffering from a severe attack of eczema. Last week it covered the middle of the body, and now it is in the face and head, particularly around the eyes. It makes us almost sightless, and at night sleepless. We now know how to sympathize fully with any person suffering with eczema.

* * * * *

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., spoke on bees and honey at a farmers' institute near Syracuse, Jan. 18. Altho the "great lights" of New York State were there, and ex-Gov. Hoard, of Wisconsin, Mr. Doolittle, we understand, was as well received as any. Of course he would be, for he's a fine off-hand speaker, as was shown at the Buffalo convention, where he gave a splendid address. Mr. Doolittle and Rev. E. T. Abbott we believe are among the readiest public speakers of all the bee-keepers that we know. No one would ever go to sleep under the sound of their voices. Both of them ought to be kept in institute work a good share of the time, on the subject of bee-keeping.

* * * * *

THE MASCOTTE INCUBATOR CO., of Bedford, Ohio, report that they have been barely able to keep up with their orders by running their factory at its fullest capacity, and night and day. The Mascottes are standard machines of the hot-water type, and are finisht in the highest style known to the art. In hatching and brooding they leave nothing to be desired if we are to judge by the testimony of those who have used them, and should therefore know them best. Write these people for their new catalog, which gives full details of construction, etc. Also mention this journal when writing them.

* * * * *

ALFALFA OR BASSWOOD HONEY we can still supply as per our advertisement on page 94. There should be the best demand of the year for the next few months, and bee-keepers should supply it. Canned fruits will be running out in many a household, and honey will come in as a great help to the housewife. We can make prompt shipment at the prices quoted. Better try a two-can order, hadn't you?

* * * * *

DR. A. B. MASON, Secretary of the United States Bee-Keepers' Association, is already working on the program for the 1899 convention to be held in—in—well, we don't know just where yet, but it will be in some good place. We were going to say in Philadelphia. And the program will be a good one, too. The big Doctor knows just how to build it. He's had lots of experience "along that line."

* * * * *

MR. E. E. HASTY, of Lucas Co., wrote us Jan. 21 that he was "nursing a stubborn case of la grippe." This has been another winter when that heartless enemy has had things pretty much his own way in many localities. We hope that he will not deplete the ranks of bee-keepers. They can't be spared just yet.

* * * * *

MR. O. O. POPPLETON, of Dade Co., Fla., writing us Jan. 18, said:

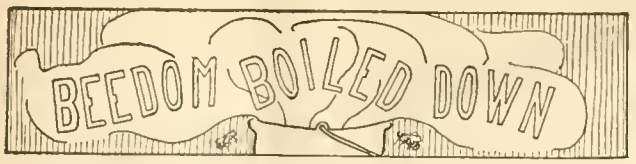
"Bees are gathering some honey, and commencing to build up. The winter so far has been very mild, more so than usual, the thermometer indicating from 70 to 85 degrees every day for weeks past."

* * * * *

MR. F. F. ZILLMER, of Grant Co., Wis., writing us Feb. 1, said:

"The weather has been intensely cold the past three or four days—it is 25 to 28 degrees below zero."

The Premiums offered on page 62 are well worth working for. Look at them.



A Slatted Separator for Inset Sections being demanded, the A. I. Root Co. are preparing to meet the demand.

Large or Small Hives, according to A. E. Manum, in American Bee-Keeper, is a question for each one to decide for himself. The Dadants are right in using large hives, and G. M. Doolittle is right in using small hives.

Painted Hives are preferred by C. Davenport. They keep in good condition for 20 years, while unpainted ones begin to decay in seven or eight years. He does not believe with Doolittle that bees do any better in unpainted hives.—Bee-Keepers' Review.

Peppermint Honey as gathered in the West is reported, in the Progressive Bee-Keeper, as "curious looking stuff." Of excellent flavor, "but the cappings have exactly the appearance of moldy combs, even on the closest inspection by the naked eye; and yet there is no mold about it."

Honey Carried from Brood-Nest into Sections.—At time of fruit-bloom, E. A. Daggitt gave each colony a super of partly-finisht sections. At the close of fruit-bloom quite a little surplus was found in the sections, but it proved to be buckwheat honey, showing that it must have been carried up from the brood-chambers.—Bee-Keepers' Review.

Big Hive-Entrance for Winter.—Mr. Ruffy formerly closed carefully all cracks and openings in his hives, made the entrance as small as possible, and yet each spring he found moldy combs, spoiled stores, numerous cases of diarrhea, queenlessness, etc.; while at the present time with entrances open full width, and colonies ready for winter by the middle of August, he has excellent results.—Muenchener Bztg.

Winter Feed.—"We often get inquiries on how to make a bee-candy for a winter feed when combs of sealed stores are not to be had. The best candy is the Good or Scholz, and is made in this way: Mix sugar and honey into a stiff dough; allow it to stand for a couple of days in a warm place and then knead in more sugar. Granulated sugar may be used; but powdered, or, better still, confectioners', is much better."—Gleanings.

Tall Sections are Finisht Faster and Better at the sides than square sections, says R. C. Aikin, in the Progressive Bee-Keeper. In comb-building, combs always progress much faster downward than sidewise, so the square section is finisht down the center before at the sides; while the tall section will be finisht farther down and stand transportation better. For this reason he also favors bottom starters for any sections that are to be shipt.

Wax-Sticking and Cracking.—Dr. Miller having directed to wet a wooden mold to keep wax from sticking to it, I. W. Beckwith says, in the Bee-Keepers' Review, that no amount of wetting or soaking will do if the wax is put in very hot and allowed to cool slowly. He sets the vessel of caking wax, when convenient, in ice-water, and if it shows a tendency to crack, as it seldom does, he runs a thin knife-blade half an inch deep between the wax and tin.

Foul Brood.—G. Sawyer tells, in the British Bee Journal, how he uses the McEvoy method of curing foul brood. He thinks it an advantage to give young queens, and does not agree with Mr. McEvoy that it is needless to disinfect the hive. He says:

"My method of procedure is first to examine the hive, and, if found affected, I do nothing else in the apiary that day. Meantime, I make some rough frames, in which strips of foundation about ½-inch wide are fixed. After the bees have ceast flying for the day, I go to the hive, shake off all bees from the combs and replace with the frames fitted with starters. The diseased combs and frames are then promptly burnt, which, when burnt out, have a bucket of water—to which a plentiful supply of carbolic has been added—thrown over the ashes. This is important, because the honey, when getting hot, is apt to run, and if in the vicinity of other bees, they will be sure to get at the melted honey and carry it off to their hives. The bees under treatment remain on the starters for three days, during which time no food is given. On the expiration of the three days, the bees are shaken off the 'starters' into a clean hive on as many full sheets of foundation as they will cover, and fed up with some good syrup medicated with naphthol beta. By this time they will appreciate the food, and, with me, bees so treated soon work up into a strong colony. Finally, the old hive is disinfected as recommended in the 'Bee-Keepers' Guide-Book,' and the frames of starters together with all old quilts burnt."

Formic Acid for Foul Brood.—Foul brood appeared in the apiary of J. Pontonnier, and the editor of Revue Internationale advises him to try formic acid. He took 100 grams of water, 100 grams of 25 percent formic acid, and 50 grams alcohol, thus making a 10 percent solution of the acid. He used 100 grams of this solution upon each colony. Without brushing off the bees, he sprayed each comb with an atomizer, thoroughly going over everything, unsealed as well as sealed brood, and cells containing honey, excepting no part. Three such treatments, perhaps a week apart, seemed to leave the colonies in health. But authorities in this country have little faith in drugs. A rather discouraging thing for drug treatment is that while cures are frequently reported across the water, there is no persistent settling down to any one remedy as successful.

Pressure for Wax-Extracting is advocated in the Bee-Keepers' Review. The editor thinks the man who renders old combs in the solar extractor losses ½ or ⅔ of his wax, with steam ⅓ is lost, and with boiling ¼. I. W. Beckwith, by means of a squeezer made of two planks hinged together, got the wax out so entirely that the residue was dry and mealy instead of being the usual hard cake of slumgum. F. A. Gemmill took 21 pounds of slumgum left by the steam process, and by boiling and putting through a screw-press he got seven pounds of the finest wax. With the press he got from eight Langstroth combs three pounds of wax, one-half of which had perhaps been given in the foundation.

Bee-Escapes Are Not Liked by Mr. Bruce for extracting-supers, because they allow the honey to get cold for extracting. For comb honey he prefers to pile supers 10 or 12 high "with a generous light-admitting screen-escape arrangement on top." F. L. Thompson failed with the same arrangement, using it late in the season when bees are sluggish.—Progressive Bee-Keeper.—Mr. Thompson will probably succeed if he sets his piles in the hot sun, especially if bees are busy.

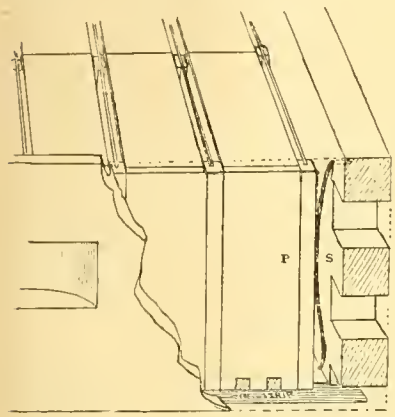
Work for the Bee-Keepers' Association.—If the bee-keepers of this country would support the United States Bee-Keepers' Association to the necessary extent to enable it to permanently engage an expert salesman, whose business it would be to develop a demand for honey put up and guaranteed by the Association under its official trade-mark, we firmly believe that every member who produced 100 pounds of honey annually would derive, in increast price, the cost of membership.—American Bee-Keeper.

Lumber for Sections.—Editor Hutchinson, of the Bee-Keepers' Review, says a man must use "a mighty deal of nice consideration" before he turns out a first-class section. In the matter of timber alone there must be great nicety. The wood of old trees is too dark. Only young, thrifty trees yield white wood. It must be cut in winter when the timber is frozen, and must be sawed before it thaws, for if sawed when not frozen it will be of a dark cream color. Spring must find the little, short planks piled up, but not too closely, or it will mildew.

The Secret of Well-Filled Sections, Editor Hutchinson (Bee-Keepers' Review,) seems inclined to think something that has yet eluded our grasp. Better filled sections have been claimed for fences, because there was freer communication. Editor H. agrees with E. A. Daggitt that, on that basis, the best filled sections ought to be those secured without separators, but expresses his conviction that "combs are more perfectly attacht to the sections when separators are used than when none are in use." No doubt a good many will hold a different view.

Root's Column

It seems to be generally admitted that a means for producing compression on sections when in the super is desirable, and some go so far as to say it is a necessity. If sections and separators are placed in supers loosely, it leaves little interstices or spaces that the bees fill up with propolis. Various devices have been used to bring about the desired compression. Some prefer and use thumb-screws; others, wedges; and still others, tightening-strips. Thumb-screws stick out in the way, and sometimes in damp weather become stuck fast in the holes. Wedges are very often propolized fast, making it difficult to remove them. The same objection applies to tightening-strips, altho to a less extent. We now use two or three springs to our 1899 supers, one at each end, bearing against the ends of the fences, and one in the center. See S in the cut below:



These springs produce a gentle, even pressure against the contents of the super; and, no matter how much the weather changes, causing the stuff to shrink or swell, those springs will produce always a gentle yet firm pressure. After the sections are filled they can be easily taken out, owing to the fact that there is a *yielding* pressure; and propolis—well, it has no show.

In the next Bee Journal we will show you how these springs are applied. Meantime—

KEEP YOUR EYE ON THIS COLUMN,

for we may be able to save you dollars.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bees Helpt the Fruit.

I got 900 pounds of honey from 90 colonies of bees this year. Prospects were good in the spring, but the honey crop failed to materialize. My apple and peach orchards paid quite well, which is partly owing to the services of the bees in pollenizing the bloom. This was an incidental benefit fully equal to what they could have done storing honey in a good year. D. L. FILES.
Monroe Co., N. Y., Dec. 21.

A Fairly Good Season.

This has been a fairly good season for bees. There was no early or white honey stored above, most of the surplus being gathered in August from smartweed or lady's-finger. Honey is about the same price here as it was last season.
FRANK L. GOSS.
Vernon Co., Mo., Dec. 26.

He "Blames" the Bee Journal!

My bees did very well this year. I had 15 colonies, spring count, and got about 1,200 pounds of honey, part extracted. People want to know how the bees get so much honey in the city. I tell them it is not the locality, but the American Bee Journal that does it. M. M. RICKARD.
Erie Co., N. Y., Dec. 26.

Fears Hard Winter for Clover.

My bees are quiet with a temperature in the cellar of 43 degrees; outside, zero weather, with but little snow on the grouud. I am afraid this will be hard on white clover; still, let us not borrow trouble.
WM. M. BARNES.
Richland Co., Wis., Dec. 27.

Bees Didn't Do Much.

Bees did not do much here last season. I have 80 colonies on the summer stands, and had to feed part of them before packing them for the winter. They had a good flight to-day, and all appeared in good condition. The prospect for the coming season is good.
G. C. ALLINGER.
Marion Co., Ohio, Dec. 29.

Beginning with Bees.

I could not think of keeping a colony of bees without the American Bee Journal. I am a beginner, with four colonies, which did poorly the past year, but I am not discouraged, as they were bought late in the season, just after the linden flow.
Richland Co., Wis. MRS. F. C. PENNEL.

Bees Did Very Well.

My bees did very well this year. I got about 4,000 pounds of comb honey from 92 colonies, spring count, and increast to 150, half of which I put iuto the cellar; the others I am wintering in a house lined inside and packt with leaves. I wintered some 25 colonies last winter in the same place, and they came out all right.
Iowa Co., Wis. WM. J. HEALY.

Season of 1898—Bees and Colors.

The bees came out of the cellar in the best condition I ever saw them in 1898. I had 130 colonies, all strong and healthy. It was a hard spring on the bees, and by the time the white clover bloomed they were weak in numbers. I got 1,200 pounds of basswood and white clover honey mixt. The basswood is five miles away. I got a little over 2,000 pounds of buckwheat honey.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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OUR LARGE '99 POULTRY GUIDE FREE. Explains all. Worth $25. to anyone, The largest and most valuable book ever published. Contains over 180 new illustrations, hundreds of valuable recipes and HOW TO MAKE POULTRY PAY BIG. Send 15c. for mailing and postage.
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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
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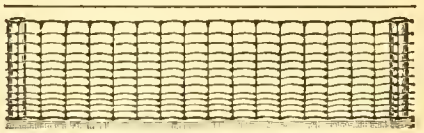

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I never feel so good as when I am selling a neighbor Page fence, as I know from experience I am doing him a favor. CHARLIE STRONG."
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For 3-4 Pound at $3.75 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.75 per gross; 5 gross, $3.50 per gross. Address,

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.
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F. B. MILLS, Seedsman, Box 88, Rose Hill, N. Y.
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Sixty-pound Cans
FOR SALE CHEAP!

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BY STEAM—with the simple, perfect, self-regulating
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Including their discounts for goods wanted for use another season. It will pay you to send me st of goods wanted. Cash for Beeswax.
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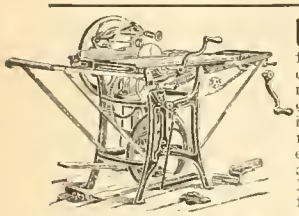
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Beeswax Always Wanted
for Cash or Trade at highest price. Catalog for 1899 will be ready in January.

Send me your name, whether you are a small or large consumer or dealer.
GUS DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

I moved 41 colonies and ran them for comb honey, getting 1,000 sections. I got only 10 new swarms this year.

I see this question was askt in the Bee Journal if bees would sting black any quicker than any other color. I find on Sunday if I go in the bee-yard with a black hat on I am apt to get stung, when if I put my straw hat on they don't bother me. They don't mind the Sunday clothes if I have my old hat on.

Bees will store just as much honey without a bee-paper, but I think it pays me to take two. CHAS. BLACKBURN.
Buchanan Co., Iowa, Dec. 28.

Honey Crop a Failure.

I have 42 colonies of bees in fine condition for winter, packt with chaff in the new Champion chaff hive. My bees are nearly all 5-banders. Our honey crop was a failure the past summer, but I hope for a better season to come. H. C. CLYMER.
Linn Co., Iowa, Dec. 27.

Bees Light in Winter Stores.

My bees are tuckt away in winter quarters, but I am afraid some of them will get hungry before spring. I fed some, but I never put bees in as light before. I hope we shall not have another such season sooo.
J. C. ARMSTRONG.
Marshall Co., Iowa, Dec. 28.

Reports for Two Seasons.

I have 80 colonies in my apiary. I got about 3,000 pounds of honey last year, and about 2,500 this year. S. M. JONES.
Norton Co., Kan., Dec. 22.

Bees Did Fairly Well.

Our bees did fairly well on white clover and basswood the past season. The fall flow was light. I had 87 colonies when the honey-flow began; at the close of the season 136, then doubled down to 111. I would have put them down to 100 if the weather had kept warm. My honey crop was 2,800 pounds. JOHN TURNBULL.
Houston Co., Minn., Dec. 7.

Seem to be Wintering Well.

My 98 colonies of bees seem to be wintering all right, so far. They had several good flights last week, and seem to be in good condition. W. S. FEEBACK.
Nicholas Co., Ky., Dec. 26.

Slim Honey Crop.

We had a very slim crop of honey here this year. During the white clover bloom it rained all the time, and the bees stored none. I never saw basswood so full of bloom, both great and small trees, but the bees only seemed to look at an occasional one. I got no honey except late fall honey, and but little of that, but I could hardly expect much, for I started in last spring with one colony of blacks and four Italians, and increast to 20, besides two swarms went away. The increase all came from the Italians; they filled their hives in a short time, and then went to swarming. I could only stop them by injunction. J. M. CLOCK.
Wood Co., Wis.

Report for 1898.

I do not want to get along without the "Old Reliable" as long as I can get the "necessary evil" to help keep it going. I look for a better paper for 1899 than the past year, as it has been improved every year since I became a subscriber.

Stick to the spelling reform. Others will follow the good example in time.

I started the past season with 8 colonies, bought one new swarm, and increast to 20 colonies, taking 500 pounds of No. 1 comb honey, besides 50 unfinisht sections. The

THE BEST WAY
to make money is to save it. We can save you money on everything in the vehicle line. We make a full line of Surries, Buggies, Phaetons, Spring Wagons, Road Wagons.
WE SELL DIRECT TO YOU From Our Factory At Wholesale Prices.
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ROCKFORD POULTRY FARM.
FREE! A young cockerel or one setting of eggs to the person suggesting the best name for a Cornish Indian Game cockerel that is taking the first prize wherever shown. We also have a fine lot of Light Brahmas, Barred Plymouth Rocks and White Wyandottes. Send 10c for catalogue. Lice Killer Formula and particulars.
Box 875 Rockford, Ill.

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GET MORE EGGS. How? Feed the hens on **green cut bone.** They will lay double the eggs right in the middle of the winter, when eggs are worth most money.
DANDY Green Bone Cutters with or without gear are the best machines for preparing bone for fowls. **Cut fast, turn easy.** Catalogue and prices free.
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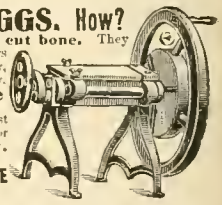
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the best general FARM and BEE paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want.
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KEROSENE SPRAYERS
is simple indeed. Kerosene Emulsion made while pumping. 12 varieties Sprayers, Bordeaux and Vermorel Nozzles, the **"World's Best."**
THE DEMING CO. SALEM, OHIO.
Western Agents, Hennion & Hubbell, Chicago. Catalogue and Formulas Free.

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SAVE FEED.
Feed is fuel to the animal economy. It is burned up to supply it ereal heat. If it is heated (cooked) before it goes into the animal's stomach it saves that much fuel (feed).
Electric Feed Cookers
save feed, save money, and produce better results. Made of best cast iron with steel linings; boiler made of extra heavy galvanized steel. Capacity 25 to 100 gallons. Circular and price free.
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bees are all in the cellar, with a good quality of stores, but some are short.

There was no fall flow here, and owing to rush of other work feeding was neglected until too late. "Poor management."

O. B. GRIFFIN.

Aroostook Co., Maine, Dec. 21.

Bees Did Poorly.

My bees did poorly. From 11 colonies I got 300 pounds of comb honey. The bees are in good condition, with plenty of stores. I winter them out-doors. J. C. SMAIL.

Hancock Co., Ind., Dec. 26.

Poor Season for Bees.

I have been in the bee-business about three years, and have now 70 colonies in a house, all in first-class condition. I put in the house last winter 45 colonies, and took them all out last spring in good shape; but it has been a bad year with me here, as in the blossoming season it rained all the time, and then it came off so dry that there was no moisture in the flowers, and clover all dried up. So I did not get much surplus honey, and left me with about 1,000 sections with starters in them.

I am in a good location as there are not many bees within miles of mine, and plenty of white clover. FRANK VAN DYKE.

Greene Co., N. Y., Dec. 23.

Not a Prosperous Season.

My bees did about the same as a good many others—from 24 colonies I got about 600 pounds of comb honey, not quite one-third as much as I got last year. There seemed to be plenty of clover, but the bees did not work on it, and it was the same with buckwheat. But I will try to have them do better in 1899.

J. H. LOGEMANN.

Worth Co., Iowa, Dec. 28.

The Land of Rain.

This land of flowers, the past few months, could appropriately be called the land of rain. There has been down-pours, showers and real trash-movers since August last, and one time there was some rain fell every day for 30 days. So much fresh water running into the bay caused the death of shell-animals, such as oysters and conchs.

Roses are blooming, and bees find something to do in the ti-ti thickets. The growth of underbrush is so thick that it protects flowers from frosts, which so far have been light.

Honey in sections is selling for 10 cents a pound, or three pounds for a quarter. Honey gathered from saw-palmetto is thought to possess medicinal virtues.

MRS. L. HARRISON.

Washington Co., Fla., Jan. 2.

Bee-Stings and Rheumatism.

There has been so much said on the subject of bee-stings and rheumatism that it is useless for a man of my calibre to try to add anything new, but after reading the discussion on page 812 (1898) I am led to state a few facts, and facts or the truth is what every one should seek.

I was born April 30, 1824, consequently I will be 75 years old next April. In 1862 I inlisted in the service of my country, and served three years; during that time I contracted rheumatism, from which I have suffered ever since. I have been confined to my bed for a month at a time; at other times I could not lie down for a week, and all the sleep I got was in a rocking-chair by a warm stove.

Since 1880 I have received $8.00 per month pension. My rheumatism has brought on heart disease of a very dangerous nature (a hardening of the valves), for which my pension was increast two years ago to $17 per month. During this time, since I was 17 years of age, I have workt among honey-bees almost every season, and have been

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when the losses incident to hatching and early life are reduced to a minimum,

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will hatch all the fertile eggs, and will produce strong, healthy chicks—no lice; no disease. The hen can keep on laying all the year. *It is the only practical machine made.* Its hatches are uniform; the regulator works perfectly. Send 10 cents for illustrated catalogue, which also tells of our mammoth poultry farms.

RELIABLE INCUBATOR AND BROODER CO.,
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The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

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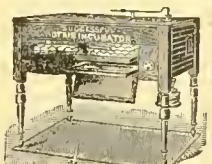

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NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the LARGEST FACTORIES and the latest and most improved machinery for the manufacture of Bee-Hives, Sections, &c., that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the BEST GOODS AT THE LOWEST PRICES.

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A beautifully illustrated paper called "The Corn Belt" is published every month and contains a quantity of interesting information about the farm lands west of the Mississippi River. Pictures of all sorts of farm scenes in Iowa, Missouri and Nebraska. Personal experiences of farmers who went to those states from the East years ago. The handsomest farm paper published. Send 25 cents for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

Think of the Future. Don't Rent. Establish A Home of Your Own.

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stung times almost without numbers, both before and since I was troubled with rheumatism, and I never receive any benefit or obtained any relief from stings of the honey-bee; the severity of rheumatism has increast rather than diminisht.

What is rheumatism, or rather, what causes it? I once askt a physician this question, and his reply was, "It is acid in the blood." An alkali neutralizes an acid, hence physicians administer potassium to neutralize the acid in the blood. Scientists tell us that the poison of the honey-bee sting is formic acid. Will one acid neutralize another? Those acids which were first recognized were sour, but now there are acids that have not this property. Is formic acid one of them?

Let us hear from those who know. I have known where rheumatism has left a man as suddenly as it came, without any bee-stings, as in Dr. Mason's case. I don't wish to make light of any man's opinion, that thinks he has been relieved of rheumatism by bee-stings, but I have no faith in it. But when doctors can't agree, how shall we know the truth? S. B. SMITH.

Millelacs Co., Minn.

From Away Up North.

I am very fond of the Bee Journal. Its patience and good humor are very refreshing. I have no bees just now, but intend to make another trial in the spring. I had one colony last year, but they all disappeared some way. I think the blackbirds, catbirds, toads or mosquito-hawks must have gobbled them up. I noticed some very large black crickets with feelers over two inches long, the bodies 1½ inches, and big, round heads. I never saw anything bide themselves so quickly, and station themselves under the bottom board. But I only saw them attack dying bees, and I do not think they entered the hive at all. Perhaps they were only pall-bearers come to the funeral. THOMAS HENRY.

Muskoka, Ont.

A Report from Oregon.

Last spring we started in with nine colonies and increast to 14, but one of the old colonies was eaten up by worms. I got 300 pounds of honey last season. I intend to Italianize next spring. I have 11 cedar hives and two Eastern pine. I like the cedar better, as they are lighter. There were 750 tons of dried prunes shipt from within seven miles of me, and the bees did not bother when drying them.

I sowed some sweet clover in 1897, and last summer it grew from three to seven feet high. Some of it is in blossom now.

Our first frost was Dec. 7, and we had cold weather till the 14th. There is no sweet clover except where we sowed it. The bees workt on it real well.

Our best honey comes from poison-oak blossoms. It is almost clear, and real thick.

Our bees have plenty of honey to winter on. The coldest it has been in the last six years here was 16 degrees below zero.

HERBERT PRUNER.

Douglas Co., Oreg., Dec. 20.

An Experience with Hives.

I have kept bees for some time and tried to learn something of their habits, and find that it pays to give them comfortable homes. I began about six years ago, and soon adopted the dovetail hive, using mostly 8 frames—a few 10. I attended the bee-congress at Atlanta during the Fair at that place, and met Mr. Danzenbaker, who showed me all about his hive, but I did not try it then. At the same time he met my friend, Dr. Copeland, and the consequence was, the next season Copeland adopted the Danzenbaker hive, and seems to be well pleased with it. Knowing Copeland to be a man that took pains to get out all the money there was in a thing, upon his recommendation I bought some of the same hives and have used them for two seasons, and I am sorry that I did so, as they are

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tells first of all about the wonderful with a complete history of the laws of incubation. Then about the money there is in poultry and how to get it. All about modern poultry houses with plans for construction and cost. Tells how the big breeders succeed and gives pictures of their plants. It's worth many times its cost. Sent for 10c. Circulars free. The CYPHERS INCUBATOR CO. Box 50, Wayland, N.Y.

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
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Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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Queens for Business ******
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

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ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

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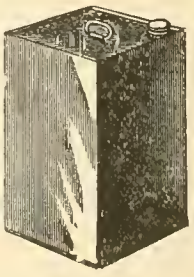

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Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

very much more difficult to manipulate, and 2-5 of the bees went up into the super to rear brood. I think the brood-frame is too shallow, and if I were to change from the Langstroth depth, I would want one deeper rather than shallower.

I have also tried the tall section and I don't think it is any improvement over the regular size. Bees will enter and work sooner in shallow sections than in the tall ones, as I take it most bee-keepers will admit. This has been proven in more than one way. They will not work on deep extracting-frames when they will willingly do so in shallow ones.

I have tried the Golden method for comb honey, and find it doesn't give me satisfaction. I believe the best all-around hive for this country is the 8-frame dovetail hive, with plain sections and fence-separators.

Polk Co., Tenn. M. T. FOUTS.

[We fear Mr. Fouts has hardly given any of the hives mentioned any very extensive trial. At least his experience is not all borne out by that of many others.—EDITOR.]

Poor Way to Begin Bee-Keeping.

Bee keepers sometimes have methods brought to their notice that are not taught in either the text-books or bee-papers; and judging from the results that followed the method adopted by Henry Weisse, of St. Paul, it has not much to recommend it to those about to start in the bee-business.

Having decided to join our ranks May 9, 1898, Mr. W. proceeded to the apiary of J. J. Scott, in this county, where he obtained 4 colonies (about the right number for a beginner), but neglected the slight formality of either getting Mr. Scott's permission or leaving any of Uncle Sam's shekels to compensate Mr. Scott for the loss of his property, with the result that Mr. Weisse was committed to the Hennepin county bastile on May 30, from which institution he was liberated on $500 bail. The grand jury having found a true bill against him, he was tried in Minneapolis, Oct. 13, and sentenced to two years in the State's prison.

If Mr. W. had taken the American Bee Journal he would have known for $1 00 just what it will cost him two years of "hard labor" to find out, viz: That he adopted a poor plan tobegin with, and also that "the way of the transgressor is hard."

Hennepin Co., Minn. WM. RUSSELL.

Bees Did Quite Well.

Bees did quite well this season in this section of country. I got about 2,000 pounds of extracted and about 200 pounds of comb honey from 35 colonies, spring count.

I have 49 colonies in the cellar in fine condition. It is about 20 years since I first started in the bee-business, but I lost my start a number of times, but did not give it up as I liked the little bees too well to be without them.

I got my last start in 1892, when I went to the woods with my neighbor—an old bee-hunter—and found six swarms, which I wintered in first-class shape. I have been successful since that time with the exception of one year; we had a large supply of honey-dew which was death to the bees.

I have had a great deal of experience in hunting bees in the woods and transferring them to hives. I believe I can hunt bees with any man. If I want to have a pleasure trip I take my hunting outfit and start out. J. A. DOERR.

Sauk Co., Wis., Dec. 26.

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and send them our Incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fail with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on Incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.

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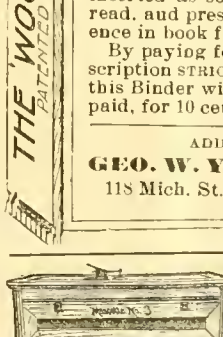

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The MASCOTTE INCUBATOR

not only prevents such waste, but turns failure into success. Regulates perfectly as to heat, and ventilation. Guaranteed. Send at once for FREE catalogue.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Jan. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & Co.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good, Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

BOSTON, Jan. 9.—Fancy white, 13@14c; A No. 1, 12c; No. 1, 11c; light amber, 9@10c; buckwheat, no call. Extracted, white Northern stock, 7@8c; Southern stock, 6@7c. Beeswax, 27c.

The demand for honey seems to have dropt out of sight during the holiday season, but now that is over we hope to see a better call for it. There is abundance of stock on hand and it now looks as if the expected shortage would not materialize. BLAKE, SCOTT & LEE.

SAN FRANCISCO, Dec. 28.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

There is very little extracted honey now obtainable, and of water-white the market is practically bare. Comb is still in fair supply, with inquiry for the same of a light order. Market is firm for extracted and steady for comb.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

BUFFALO, Jan. 27.—There is a little more activity on strictly fancy 1-lb. combs at 12c. The bulk of receipts of low grades sell at 10c. down to 7c., and in a few cases even less. A moderate amount can be sold every day. Extracted, 4@6c., according to quality.

BATTERSON & Co.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

A. V. BISHOP & Co.

4,000 Pounds

is the guaranteed capacity of this wagon. It is equipped with

ELECTRIC STEEL WHEELS

with stagger oval spokes, broad tires, etc. It has angle steel hounds front and rear. It's low down and easy to load. One man can load it; saves an extra hand in hauling corn fodder, etc. A pair of these wheels will make a new wagon out of your old one. Send for free catalogue and prices.

Electric Wheel Co. Box 16, Quincy, Ill.

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Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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Why does it sell so well?
Because it has always given better satisfaction than any other.
Because **IN 22 YEARS** there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss. PATENT WEED PROCESS SHEETING.**

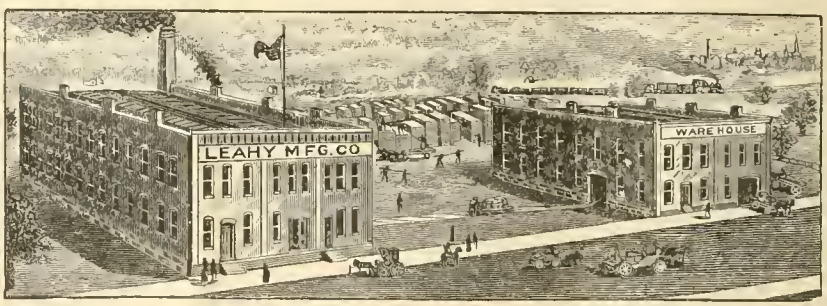
Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies of all Kinds.

Langstroth on the Honey-Bee—Revised.
The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Please mention Bee Journal when writing. Hamilton, Hancock Co., Ill.



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Do you expect to buy anything in the line of Apiarian Supplies the coming year? If so, we would be pleased to hear from you as to what you want, and mail you our Catalog. As we keep

Several Carloads of Supplies

in stock, we can ship promptly, and our location insures you low freight rates and quick transportation.

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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., FEBRUARY 16, 1899. No. 7.

CONTRIBUTED ARTICLES

No. 4.—The "Golden" Method of Producing Comb Honey Described.

BY J. A. GOLDEN.

[Continued from page 66.]

FIRST, then, is a properly constructed hive, either a new hive or a remodeled one, as previously described.

Second, a normal colony of bees.

Third, a good queen, and her wings clipt.

Fourth, when your colony casts a swarm pick up the clipt queen and let her run in the cage, as previously noted.

Fifth, remove the parent hive from its stand and place the two prepared supers with sections on the stand, then remove one of the sections from one of the middle rows of the top super, and insert the caged queen, setting the parent hive on top of the two supers. If a super was on the hive at the time of swarming, just leave it on, and return the section (taken from super) to the feed receptacle which always remains on top.

Now take from the little pocket in the back end of the feed receptacle the slate, and register the age of the queen, and date of swarming, and don't forget, when taking off surplus, to register the same. Return the slate, and cover up the hive, by which time the bees will have returned, finding their royal mother occupying new quarters, ample, clean and tidy, and at once commence work.

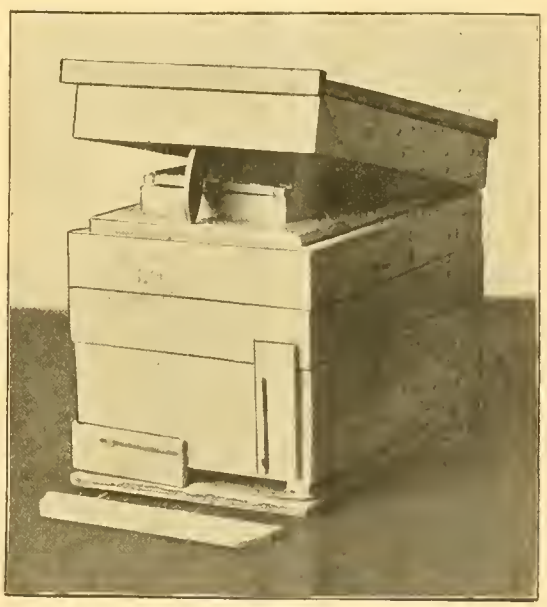
(I will note here that some have reported that the bees re-swarmed after returning the queen, but almost all afterwards reported that the queen-cell or cells had been overlookt, therefore I advise setting a zinc entrance-guard for two or three days after releasing the queen.)

Sixth, on the fifth or sixth day, in the evening, lift the frames from the hive one by one, and shake or brush the bees at the front of the hive, and examine closely, and if you want to return the queen destroy every cell and anything that looks like a cell, as I have found queen-cells with just the tip showing above worker-brood, and having the miniature cups plainly markt.

But if you want to supersede the queen, take your choice of cells, and pinch the mother-queen's head, having examined all the frames; and if you wish to reserve two frames of capt honey for winter or spring stores, take out the two outside frames and set or hang them in the fuming-box, and insert two dummies in their place, and put the parent hive on the stand, placing the two supers with the swarm on top of the parent hive; removing the queen and cage, insert the section that was previously set in the feed receptacle, and if a super was on the parent hive set it on top of the two occupying the swarm, and if having reserved two frames of capt honey, record it on the slate also, and put on the cover, then the 5-inch rim and cover, and if the queen is to be returned let her run in at the entrance with two or three puffs of smoke.

The question has been askt why I recommend making this change in the evening. I do so because all worker-bees are at home, and by morning every worker knows her department, and all goes well. Should you make the change at noon, all the difference would be, the bees would be bothered quite a little while, so it is advisable to change in the evening.

Seventh—Now it must be remembered that a new swarm of bees will work far more energetically until they build up to a normal condition than at any other time, consequently one must not overlook this and neglect to supply colonies on this method with plenty of surplus room, so there are thousands of workers already, and thousands still coming in upon the stage of action; and as the queen has been deprived from depositing eggs five or six days, she has now an opportunity, as many cells await her; otherwise, if the bees have not plenty of storing-room they will crowd the queen out by depositing their nectar below, and thus deprive the



A View of the Golden Hive Perfected.

queen of her mission, then sulk into the swarm fever, and results will not be satisfactory. A little too much room is better than not enough. Of course, one must use judgment, also be guided according to the flow whether long or short.

Having been censured for being reserved in giving in-

formation on my method in former articles, I trust the foregoing will be ample, and so plain that all may test it; then, having kept a record, as previously noted, figure the difference between a colony on the Golden method and the best colony workt on any other method, and report results. Practical tests are the proper methods to test it, and not what Golden or any other bee-keeper says, before you put all your eggs in the basket at one time.

Also, I ask in making out a record, don't forget to consider the new hives, frames and comb foundation one would have to make or buy for other methods when hived in separate hives; also the cost of brood-combs and the honey they contain, etc. Then contrast that with the same number of colonies on the Golden method, and see which you prefer to follow. Then be happy while following it. Am I not fair in the proposition?

Again, when the flow begins to wane, keep taking out finisht sections and keep filling in their places sections nearest finisht, thus reducing the number of supers as fast as the outlook will admit, by which one can have nearly all sections finisht, providing the flow is not cut short suddenly.

After the surplus receptacles are removed, and you have some sections nearly completed, place a super over the brood and fill up with sections to be finisht, then place over it an empty super and feed receptacle on top, and put in it one or two sections having a small amount of honey in them, and see how quickly the bees will empty them and store in the sections below. Then you can keep increasing the amount to be carried down, and thus you can save much nice comb, and at the same time have more finisht comb honey.

After the flow closes, remove all surplus receptacles, take out the two dummies, moving the two outside frames to the side of the hive, and insert two frames filled with comb foundation. When you prepare your colonies for winter, if those frames are full of honey, you have two nice frames of capt honey stored away for each colony. But if a fall flow comes, you will have four in place of two.

To prepare colonies for winter, make cushions of cheese cloth or any cheap material, and loosely stuff with any choice of packing, so as to completely fill the feed receptacle. Close the wire-cover, and pack all around inside of the 5-inch rim, and put on the outside cover, having previously screwed the combined cover down, closing the side-entrances at the top of the brood-body, and bottom side-entrances by turning the bottom-board rim upside down, and setting the hive on the rim completely closes the same at the bottom. Then adjust the expander to suit your climate.

The idea of this wonderful little piece of furniture—the contractor and expander entrance-guard—was donated to the perfecting of my hive by Mr. J. S. Hartzell, of Pennsylvania; also the movable alighting-board, which explains itself, and which is a great saving of wide lumber in cutting. When using this movable alighting-board the bottom may be the same length as the top, thus very handy for packing in a wagon when moving to out-apiaries.

In conclusion, I here show a view of the Golden hive perfected, giving a glimpse of the combined cover in position, also showing how the expander is used. The screw-eyes are past through the saw-kerf, then the expander can be changed to any desired space, and a turn of the screw-eye secures it. It is a real blessing in a time of robbing—so handy and complete, and if you use the Golden method use the expander and the detachable alighting-board, if desired.

I have endeavored in this series of articles to make all plain. I could give many testimonials from honest bee-keepers from various parts of the United States, speaking in highest praise of my method. I kindly ask the bee-keepers throughout the world to carefully, and without prejudice, give my method, as described, a test by a practical manipulation during 1899, then report your findings, whether good or bad.

I take this opportunity to publicly return my thanks to the very many that have written me, from every quarter of the globe, so many kind wishes, all of which have been highly appreciated by me.

Morgan Co., Ohio.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Honey-Dew—An Experience With It.

BY J. A. NASH.

ON page 17, Prof. A. J. Cook writes on honey-dew, taking the ground that honey-dew is a secretion of insects, and doubts the assertion of the British Bee Journal that it is "a sweet juice that sometimes exudes from the surface of the leaves of trees and plants." For many years I was of the same opinion as Prof. Cook regarding this matter, but I have since changed my mind.

A few years ago this section of Iowa was blest (?) with a very heavy flow of honey-dew. I did not see it on anything but the hickory leaves, but was told it also appeared on the walnut. It made its appearance only on the upper side of the leaves. Every leaf had many small, glistening drops of a sweetish substance on it. The bees would leave the hives at daybreak, and continue working until the heat of the midday sun had partially dried up the leaf juice, then work ceast; late in the afternoon they would often commence again and continue until nightfall.

I never saw as great activity in the apiary as at this time. The home apiary was situated near a heavy growth of small timber (and by the way, I never saw this "dew" on a large tree). This substance was very dark-colored, had a very rank flavor, and killed over 80 percent of my bees befor the next spring, in a cellar that wintered my large apiary with a loss of about one colony in a hundred several times.

Now, I noticed this dew just as Prof. Cook says he did—from the back of a horse as I rode through the timber, and while I did not see any aphides, I had no doubt they were on the upper branches engaged in the manufacture of what some facetious writer called "bug-juice."

Now, undoubtedly, I should have believed to this day that all of the honey-dew in the country was caused by bark-lice had it not been for an old-time bee-keeper—one of the log-gum and brimstone regime—an old backwoodsman with a keen eye and a good supply of what Ben Butler called "horse-sense." He came into the apiary one morning as I sat watching the clouds of misguided bees as they fell heavily loaded on the alighting-boards, and wondered what I would do with the thousands of pounds of liquid filth (for it was not fit to eat) that they were filling the hives with, and remarkt, "Look a-here, old man; you told me that this honey-dew was made by bugs. Now, I jist cut a black hickory tree that was covered with honey-dew, and they were not 40 lice on the hull tree, as I could find, and I allow I have two good eyes. Say, don't you think it was a sorter heavy strain on them lice to make all that dew? I allow they sot up nights."

The last remark a little sarcastically. I told my old friend that very likely the falling of the tree shook the aphides off, but concluded to investigate a little myself. This time I climbed the tree, in fact several of them, and the more I lookt the more my faith in the bark and leaf louse theory was shaken.

On none of the trees examined could I find any insects except a few scattering, green-colored (very small) ones, such as can be found on hickory leaves at all times in warm weather. They are almost always found on the under side of the leaves, while the "dew" is on the upper.

A careful examination developt the fact that the leaves on the tops of the trees were covered as thickly as elsewhere, showing the theory that this substance was ejected from the bodies of insects did not bear a close inspection.

To make assurance doubly sure, I took a saw and cut off the top of a tree that stood about 100 yards away from any other timber, and observed this tree repeatedly. The tops of the upper leaves were covered as thickly as those on the lower branches. I also took a number of small limbs and placed them on the floor of the honey-house, carefully cleaning the tops of the leaves with a damp cloth. This was done in the evening. The branches were freshly cut, and no insects were visible. The next morning the dew could be plainly seen and tasted on these leaves, plainly showing that it was the juice of the leaves that from some cause burst forth and dotted them.

Now I don't wish to join issue with Prof. Cook. Honey-dew—so-called—may at times be caused by aphides, very likely it is, but I don't think that all the leaf and bark lice in Iowa could have made the honey-dew that was exuded from the leaves of Jasper county trees.

On this occasion there were tons of this stuff gathered by the bees, and the lice could not be found at all.

Jasper Co., Iowa.

National Pure Food and Drug Congress.

BY REV. EMERSON T. ABBOTT.

THE second annual meeting of this Congress was held in the city of Washington, D. C., Jan. 19-21. The program was an interesting one, and included some of the leading men of the Nation, among whom was the Secretary of Agriculture, and several other members of the House and Senate. The attendance was good, and the delegates represented almost every productive industry in the land. Scores of State and National organizations were represented, and they were nearly a unit in the belief that the passage of the Pure Food Bill as revised by the Congress last year should be urged without any material changes. There were some who thought the Bill could be strengthened by slight changes in the wording, and a few others, we are sorry to say, who wore the insignia of delegates, who were anxious to amend the Bill in order that they might kill it, but the Congress promptly sat down on all such movements.

A markt peculiarity of the Congress was its disposition not to encourage what is known as "class legislation." The bill as drafted a year ago is remarkably clear of anything of this kind, and it semed to be the almost unanimous opin-

Rev. E. T. Abbott.

ion of the Congress that it should be left so. Here is one of the essentially weak points of many pure food laws—they are enacted purely in the financial interest of the producers, and generally of a single class of producers. Now, it seems to the writer that law has nothing to do with increasing the price of the produce of any individual or class of individuals, but it does have something to do with the interests of all of the people, consumers as well as producers. While the law has nothing to do with high or low prices, it does have something to do with preventing fraud and deception.

The Pure Food and Drug Congress is not asking that any industry be suppresst, or even crippled, but it does ask the Government to compel every man to sell his products for what they are, and that he be prevented from perpetrating any kind of fraud on his customers, as does every man who, prompted by greed and avarice, misbrands any article of commerce, or mixes any inferior or deleterious article with a food product. All of the addresses delivered before the Congress, with one or two exceptions, were along this line, and were keyed to this idea.

President Blackburn showed himself to be an excellent presiding officer, and, owing to his promptness and decision, a great deal of routine business was transacted, notwithstanding there were a great many addresses on the program. It was voted to make the organization permanent, a constitution and by-laws were adopted, and officers elected to serve until their successors are chosen. The old officers were all re-elected, it being the opinion of the committee on organization (of which the writer was chairman) that those who had begun the good work would better be left in full charge for the present.

It will no doubt be of special interest to the bee-keeping friends to know that our industry received its full recognition on the floor of the Congress the same as last year. The editor of the Modern Farmer and Busy Bee, who went as a representative of the United States Bee-Keepers' Association and the Missouri State Board of Agriculture, was made chairman of two important committees, and was again named as vice-president for the State of Missouri. Mr. Secor was continued vice-president for the State of Iowa; E. S. Lovesy, for Utah, and, at the suggestion of the writer, Thomas G. Newman was named for vice-president for California.

It will be seen from this that the bee-keepers will have themselves to blame if they do not have a hand in this important legislation.

We desire to say, in this connection, that the bee-keepers of the United States are under special obligations to the "Burlington," "Big Four," and the Chesapeake & Ohio railways, for it was through the courtesy of these roads that the delegate of the United States Bee-Keepers' Association was able to attend the Congress, there being only the small appropriation of $15.00 set apart for this purpose by the Directors of the Association, and this amount would not pay hotel bills and sleeping-car fare, to say nothing about the other necessary incidental expenses. Therefore, we trust our friends will remember this, and show their appreciation of the favor by giving the roads mentioned above their patronage when opportunity offers.

We desire to say before we close that the Pure Food Bill was reported favorably by the Senate Committee during the time the Congress was in session. It was ordered printed, and a copy of it can be had by addressing the Senators of your State at Washington, D. C. The House Committee will also make a favorable report on it, we were informed, and the important thing now is for every one who reads this to write his Senators and Representatives from his District, and urge the passage of the Bill.

The Bill has found rather smooth sailing up to the present time, but it has now come to the danger line; its enemies are organized, and on hand with money and influence to defeat it. It stands in hand for every friend of common honesty, and pure food, drinks and drugs, to be on the alert and up and doing, that we may not lose the ground we have gained in our fight with this the arch enemy of mankind—the adulteration fraud.

Let us not be lukewarm; let us not be slow to act; let us not flatter ourselves that we are not personally interested, for we are. No man who eats or drinks can escape the baneful effects of this adulteration fraud, but if we are not interested for ourselves, it is to be hoped that for the good of humanity, for the good of our wives and children, for the good of generations yet unborn, we will shake off our lethargy, and go forward in our might to remove from the history of our country this cursed blight of fraud, deceit and duplicity, and that it may no longer be said that we are the only civilized country on the globe that permits the open and flagrant adulteration of foods, drinks and drugs.—Modern Farmer and Busy Bee.

Honey and Pollen Producing Trees.

BY F. A. SNELL.

AMONG the early-blooming trees that are planted for shade and ornament, the soft maple is probably the first to bloom in the Northern States. This tree yields a liberal amount of pollen, and but little honey. When the weather is mild during soft-maple bloom the bees are found humming the whole day long among the inviting blossoms, are stimulated to activity, brood-rearing is commenced, and the bees are much benefited.

This tree blooms, some years, very early, when a cold wave comes on after it has been in bloom two or three days, and the blossoms are frozen, and the yield of pollen and honey thus abruptly ends from this source. Had we years ago planted later-blooming honey-producing trees more extensively, and the soft maple not so much, our bees would have been benefited more. That matter should be more closely considered in the future in ornamenting our homes or home surroundings.

I have found the hard maple to be a true friend to the honey-bee, and well worthy of being planted by every bee-keeper and others who wish to secure one of our substantial trees. The hard maple yields a liberal amount of honey while in bloom, and blooms late enough so the weather is

generally good for the bees to work, and a great stimulus is given to brood-rearing where this tree grows in abundance.

The white or gray willow is also a later-blooming tree, and yields well in honey and pollen. It has been planted for windbreaks and shade quite a good deal, as well as for fuel. The bee-keeper who has been located near by has also been benefited. I have had strong colonies store enough honey while this tree was in bloom so the cells next to the top-bars in the brood-frames were filled with honey and sealed over. The weather was favorable during the blooming period, so the bees put in about every day. Only the observing bee-keeper knows what a pleasing condition this flow, coming before fruit-bloom, brings about in the filling of the brood-combs with honey, pollen and brood; and the amateur will almost daily open the hives to note the improved conditions daily taking place within his hives. "I have been there," to use a common phrase.

I would like to see the white willow extensively planted. It thrives well on moist land as well as upland, and can be grown on land not suitable for farming purposes. I believe a grove of these trees will pay good rent on most farms in windbreaks, fuel and protection to stock and field crops in general. The bee-keeper, at least, is hardly doing himself justice who neglects this valuable tree. The charcoal from this timber is considered with great favor.

In my locality the cherry and plum trees next come into bloom. For many years the planting of cherry-trees has here been much neglected, and where 25 years ago bushels of fruit were raised, now we may say that but little more than quarts are grown. This should not be so. Farmers and townsmen should study the different varieties of cherry trees, and select those that seem hardy and produce good fruit in near-by nurseries, and plant them. There are several varieties of these trees that fulfill the above requirements. There can be found room around almost every town home for the planting of a few of these trees, the fruit from which is most healthful.

The cherry-trees of our hardy varieties will grow on a variety of soils, and I doubt if any farm is so well occupied that room now not utilized cannot be found for the planting of from a dozen to two dozen trees. I feel free to assert that in northern Illinois not one farmer in ten raises his own cherries, and I believe the same to be true over a large part of our country. All bee-keepers should plant a liberal number of these trees and encourage their neighbors to do so by their own good example. The beautiful fruit seen growing on the trees of the apiarist would of itself have a good influence upon those passing along the highway when the ripe fruit was hanging upon the trees. The families would be supplied with fruit of their own instead of buying, as is too much the case with most farmers at present; and the honey-resources would be materially increast by the increast amount of bloom thus afforded. The trees may be planted along fences or upon sodland, or anywhere that one may elect to put them. They will do well when planted as near as 12 feet apart. Let every bee-keeper plant a few cherry-trees the coming spring. Carroll Co., Ill.

Starting with Bees—Hive Construction.

BY H. W. HECHLER.

FROM boyhood I had a natural longing for the honey-bee and bee-culture, but I never had the pleasure of owning any until three years ago, excepting some 12 years ago, when, on June 28, while working on a farm as a farm hand, I found a very small swarm of bees, not more than a quart in all, clustered on a limb of a little tree. I told the man for whom I was working that I was going to hive them, as it was good luck to find a swarm of bees. He had a big laugh at me, but with the laugh I got a nail-keg, and with a little trouble I hived them in it. Every day I would glance at my bees. I was very much surprised to see, after a few weeks, how fast they built up to a middling strong colony. As I did not know anything about bees, I then thought that another swarm came and went in with them.

In the fall, when the honey-flow was over, not knowing how much honey it would take to winter them, I supposed that they did not have enough to winter, so I killed them. But to my great surprise they had the nail-keg filled to the bottom. Then I was sorry that I killed them. This little experience only increast my desire to own and handle bees. But I never was situated so as to own any until a few years ago.

Three years ago this winter I traded a nice rocking-chair, which I made, for a colony of bees. The following summer was a poor season for bees here, and, being very weak in the spring, they did not swarm, but stored about 15 pounds of surplus honey.

In the fall I bought another colony that was strong, in fine condition, and a good grade of bees.

The greatest problem that faced me in bee-culture was hive-construction. I made several different sizes before I settled on a style of hive that suited me. And while I had this problem before me, I commenced taking the American Bee Journal, and also commenced reading the "A B C of Bee-Culture." From these two useful helps I gained much information.

I use 1x10 inch lumber, generally in the rough, and by carefully dressing it I can gain a little in the thickness, probably leaving it 15/16x9¾ inches. With drest lumber you hardly ever get over ¾-inch thick. I cut the ends out of the thickest of the lumber, so as to have good, wide rabbets or shoulders for the frames to rest upon. I gauge the top edges of ends, letting the gauge rest against the outside, to 7/16 inch and rabbet from the inside, ½ inch wide, to the gauge mark. The ends are cut perfectly square, and 13¼ inches long. This requires neat work. The sides are cut 21 inches long; this length includes 2 inches for a portico in front. The length of the hive-body proper is 19 inches on the outside. The front end is ⅜ inch narrower than the back for a bee-entrance.

After the body is nailed together I cut down from the top of the portico 2¼ inches, and on these shoulders nail a water-table—a strip 2¾ inches wide by ⅞ at one edge, and ⅝ at the other.

I prefer loose bottom-boards. The cover is made of two boards 1x10 inches, with one edge beveled. These are nailed on two strips 3 inches wide, ⅞ thick, and having a slope of 2 inches from the center of each strip, so as to form a roof.

These roof-boards should be nailed on these strips so they will fit neatly on the super and hive-body.

The super is the same length as the top of the hive, 19 inches, made out of ⅞ inch lumber, thus giving a chance to tier up as high as desired.

And last of all the frames. The top-bars are 7 16x1x18 inches long, with a comb-guide tackt on the underside, or two three-cornered (⅜ inch wide) strips with foundation comb placed between these two strips, thus holding it perfectly tight, and at the same time giving strength to the top-bar. The ends or legs to the frames are ¾x7 16x8¾ inches, and bottom piece is ¾x7-16x15¾ inches, and nailed between the legs. All these pieces are cut in a cutting-box, thus making them exactly the same length, and also square at the ends. By this method the frames will be square and hang true in the hive. Super material can also be cut in a cutting-box.

But how to space the frames and keep them spaced was a puzzle to me; and after studying over the matter for a long time, and trying different plans, some one mentioned staples in the Bee Journal. That idea alone was worth $5 to me. But it did not specify how to use them at that time. At first I tried to put them in the edge of the top-bar, but it would split the top-bar, so I tried putting them in the rabbet and spacing with a compass, and making holes with a brad-awl. I like this plan very well. Frames are easily taken out. I use 9 frames in my size hive.

This method will do only for those who are mechanics enough to make their hives, and have not much else to do in winter time, and a warm place to work in.

Keokuk Co., Iowa, Dec. 26.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Basswood Two-and-a-Half Miles Away.

I want to move 40 colonies of bees to within about 2½ miles of a rich growth or river bottom with any amount of basswood on it. Can bees make a success at that distance? IND. TER.

ANSWER.—I think you will find that bees will work well on basswood 2½ miles distant. I'd give a good deal for a lot of it that near me.

Moving Bees in Winter.

I have just bought a large apiary 17 miles from home. Would it do to take the bees from the cellar some fine day, and move them to my own at this season (Jan. 27)? WISCONSIN.

ANSWER.—Yes, if the weather is fine enough for the bees to have a flight before being put into the cellar again. I shouldn't want to take them from one cellar and put them into another without a flight, unless pretty sure they would be kept in only for a short time. Some have reported doing so with no bad consequences, and if you care to take the risk yours might be one of the successful cases, but unfortunately there have been other cases in which the results were disastrous.

Likely Dying of Old Age.

Quite a number of my bees are dying; others on a fine day will come out, fly a short distance and drop dead. They have plenty of honey. What is the trouble? OREGON.

ANSWER.—If the number is not large, there may be nothing wrong. In the course of the winter a great many bees die in every colony from old age, and when there comes a day warm enough for them to fly the healthy bees will carry out some of the dead ones and drop them on the ground, and some that are "on their last legs" will fly out and never return. It is quite possible that there is nothing wrong with your bees, so far as can be learned from your description.

Styles of Hives, Etc.

1. I bought a colony of bees last fall, size of hive as follows: 14x20, by 14 inches deep, outside measure, with 11 frames put in crosswise. What make of hive is it?

2. Are frames better lengthwise or crosswise?

3. On top of the frames was cotton stuck fast by propolis. I have them wintered outside packt in chaff. Should I have taken off the cotton before putting them away for winter?

4. Describe the different makes of hives, with their advantages and disadvantages. Being a wood-worker I could make my own hives, frames, etc. I would like to know about these hives: Langstroth, Dadant, Gallup, Heddon and Quinby.

5. What are the sizes of the Langstroth 8 and 10 frame hives? I see that make spoken of more than any other.

6. Which style of hive do you consider best for comb honey? CANADA.

ANSWERS.—1. I don't know.

2. In this country most bee-keepers prefer to have the frames running toward the entrance, so that a bee on first entering a hive can go upon any frame.

3. It is generally considered better to have some open cloth like burlap in place of a cloth that is covered with propolis so as to be air-tight. Still, if the propolized cloth is warmly covered over, and the entrance is open enough, it will do very well.

4. In one sense all the movable-frame hives in the country are Langstroths, for he invented the movable frame. The name, however, when used in a more restricted sense, is generally applied to hives with frames that do not vary much from 18 inches in length and 9 inches in depth. The Dadant and Quinby are the same, with frames of large size, 18½ inches long and 11¼ deep. The Gallup frame is 11¼ inches square. Heddon frames are 18 1-16 inches long and 5⅜ inches deep. They are not hanging frames, like the others, but are held in place by the pressure of thumb-screws. The hive can be inverted at will, and two or more stories are used at pleasure. All dimensions here given are outside measure.

To give all that has been said as to the advantages and disadvantages of these different hives would fill many numbers the American Bee Journal, so of course it cannot be given here.

5. The frame generally used for the Langstroth or dovetailed hive is 17⅝ long and 9⅛ deep. For an 8-frame hive the body is 18¼ inches long, 12⅛ inches wide, and 9⅜ deep. For a 10-frame hive the width must be 2¾ inches more. These are inside measurements.

6. All things considered, I prefer the dovetailed hive, but there are good men who use successfully almost all of the other kinds. It is possible that what is best in one place may not be best in another, and in any case the man is more than the hive.

Some Northern Extracted Honey Doesn't Granulate.

In regard to all extracted honey granulating in the North when cold weather comes, we have some that was extracted in August, 1898, that is not granulated yet. It is kept in 5-gallon cans in our shop; it was well ripened when extracted, and is as good now as when first taken. By having a good quality of honey, we are able to get better prices than do most of them on our market. MISSOURI.

ANSWER.—Here's further evidence from a well known bee-keeper that not all Northern honey granulates in winter. I'm very glad that my ignorance in this matter has been exposed, and should be pleased to know of others who have kept honey in the North without granulation. I have an idea that the thorough ripening has something to do with it.

Queen-Excluders, Full Sheets of Foundation and Wired Frames in Extracting.

1. Should I use a queen-excluder between the brood-chamber and the super in producing extracted honey?

2. Should I use full sheets of medium brood foundation, or a starter, in the surplus frames for extracted honey?

3. Should extracting-frames be wired? IOWA.

ANSWERS—1. Some do, some don't. Some object to the hindrance of the excluder to the work of the bees, but most think that of little account. Very likely the advantage of having a sure thing in confining the queen to her proper place more than pays for all trouble and cost. With my present light I should much prefer to use excluders.

2. On more than one account you will find it best to have full sheets so as to have straight worker-combs.

3. Yes, unless prevented from sagging in some other way, but if very shallow they may do without wiring.

Dampness in Hives—Early Breeding, Etc.

1. I find that some of my colonies have it very damp, the water hanging in drops under the cover and on all sides inside the hive. What is the cause and the remedy?

2. One colony has three frames nearly filled with brood, altho other colonies (seemingly in the same condition last fall) have scarcely any. I would like to know (a) Why this colony has so much brood at this time? (b) Would the queen be a good breeder? (c) Will this colony be ahead or better than others in the spring (provided, of course, that they live till spring)?

3. Will bees that take flight every three weeks or so consume much more honey than bees that scarcely take any flight through the winter?

4. I have a colony of pure Italians that will sneak around the entrances of other hives (even in chilly weather) and disturb them, causing them to be restless. What would I better do? WASHINGTON.

ANSWERS.—1. Very likely your hives are closed up too tight. Moisture is being thrown off from the bees all the time, and if there are no facilities for its escape it settles

on the walls of the hive, just as in summertime the moisture of the air settles on the outside of a pitcher of cold water. Many think the best plan is to have what are called absorbents, that is, packing of some kind, over the frames so close that it keeps the bees warm, and at the same time so open that the moisture can escape up through the packing. There is not so much need of this if the entrance is large, and perhaps the best thing you can now do is to increase the entrance in some way. If it can be done in no other way, perhaps you can slip little wedges under the two front corners, raising the hive ⅛ or ¼ inch.

2. (a) Possibly the same reason that makes the hives so damp may account for the unusual amount of brood. The bees are shut up too close; haven't air enough, and that makes them exert themselves trying to change the air in the hive, and anything that excites to activity may start breeding. Of course that's only a guess, without knowing all the circumstances. (b) It's not at all certain that she'll be better than others. (c) Probably the chances are that the colony will be no better than, if as good as, others.

3. Probably not a great deal more. The benefit of a flight once in three weeks will pay for the extra consumption.

4. Without knowing any more of the case, I should make a guess that one good way to get rid of the trouble would be to have all your bees the same as that one of pure Italians. When there is much robbing going on, it's not so much that the robbers are of bad habits as it is that temptations have been thrown in their way. The fact that those bees are hunting around even in chilly weather shows that they're not lazy, and very likely you'll find them good honey-gatherers. But they would hardly be fooling around much in the cold if the other colonies had always promptly repelled them. That colony is probably as wide-awake about defending itself as it is at trying to rob others. If all were like it, there would be little temptation to robbing, and in chilly weather all would stay at home and mind their own business.

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 87.]

THIRD DAY.

An Adequate Income from Bees by Seven Months' Labor Without Hiving.

I shall not answer this question, but leave it as uncertain as I find it. Nor shall I say anything original, but rather aim to put it suggestively, so that you may answer it.

Bee-keeping during the last few years has become less profitable. We say that organization is the remedy. It is, so far as financial returns are concerned. But when bee-keeping becomes less profitable, all its advantages, not only the financial ones, are threatened; and the great advantage of bee-keeping as an occupation is not so much the size of the money returns, as the fact that it contributes in a far more substantial and direct way than money does toward true riches.

The chief end of money is to purchase leisure; that is, the liberty to do what we can best do, without regard to the means of subsistence. Bee-keeping gives us leisure during a portion of each year without the necessity of hoarding up money to purchase it. The specialist bee-keeper with an income of $300 a year is a richer man than the city physician or lawyer with an income of $3,000. The latter may save money with a view to retiring sometime and enjoying the fruits of his labor; but meanwhile the best years of his life are slipping away; his habits of mind become fixt, and when his liberty does arrive, he is nothing more than a cog in the social machinery—the treadmill theory of existence has done its work. He is mentally crippled. He cannot work without supporting himself with the crutch of routine. He insists that crutches are a necessary portion of the human anatomy. We often refer this unnatural condition to natural causes, saying that he simply outgrows the enthusiasm of youth; but does that explain it all?

I think that to this habit of spending the best years of one's life in the pursuit of money exclusively, is largely due the veneration of work for work's sake, of mindless diligence, which is so constantly held before us by short-sighted moralists. They fail to realize that the enthusiasm afforded by spontaneous growth and activity is the highest possible incentive to diligence, and to the undertaking of just as much unnecessary drudgery, if not more, than the habit of mindless routine ever inspires, and that the man thus inspired never outgrows his youth.

But this must be practiced to become available. Training is required, just as truly in the one case as in the other. One cannot swim without entering the water. One cannot ride a bicycle by becoming a good horseman. The ability to discover and apply one's best powers, and put them to work, without the stimulus of getting something to eat, or the artificial aid of habitual routine, is a hard thing to learn; and like other difficult things, must be practiced early in life to acquire proficiency.

Not only is it hard to learn, but we do not even get the chance to learn it under ordinary circumstances. Society tells us the only work is to work for a living, or to work to get rich, and in accordance with this sentiment so manages that almost all occupations absolutely must be followed from daylight till dark, year in and year out, to be made a success of at all; and if we do not watch out, we will fall into the habit of believing this nonsense, and of regarding this condition of things as one of the laws of the Medes and Persians, which cannot change.

Right here appears the essential superiority of bee-keeping. It gives us a chance, not in the evening of life when well-nigh impossible, but now, to acquire the fullness of this attribute which distinguishes man from animals, this untrammeled freedom, this fresh energy, which comes from regarding one's self as an intelligent instead of a mechanical portion of the universe.

It is true, it does not give us the thing itself. It gives no more than the chance to acquire it; it gives the spare time, that is all. But, as I say, most other occupations do not give even this much.

Therefore, it behooves us to jealously guard this characteristic of bee-keeping from attack by the sordid and stupid mechanical spirit of the age. We do not want profit reduced to such a small margin that only capitalists can keep bees, when such numbers will be required as to keep one man hard at work all the year round, besides others during the swarming season. We want to keep this precious possession of leisure, freely given us without price in such abundant measure, as would require many years' toil of the best part of life to lay up enough to purchase.

Organization is the remedy for diminishing profits; and in our occupation it is to some extent also a remedy for diminishing leisure, by lessening the number of colonies required to make a living, and so removing the necessity for making hives and putting up sections all winter. But the fight is an unequal one. The price of honey is down now, and can scarcely be raised more than a trifle. Every method must be tried to prevent that bondage to false ideals to which so many other occupations have succumbed. The production of the most honey by the least labor is no less important than the sale of honey. Advanced methods and short cuts should be discust just as much in our conventions as business questions.

Socialistic schemes are well enough in their way, but they do not go to the bottom of the matter. As long as money alone is workt for, and the opportunities of acquiring leisure without money are ignored, it will become harder to do anything without money. It is not true that men do not get what they strive for; they do get it, and with a vengeance. They set up unthinking industry as the ideal—and then have the inconsistency to complain when the social conditions to which they have contributed react by keeping them at routine work the whole time. If they workt as hard and as unitedly for leisure as for money, they would get it.

Under present conditions, I think in most localities a man who sells his crop wholesale needs about 300 colonies of bees, in say three different apiaries, to make a fair living and have about five months of leisure, *i. e.*, unfinancial work.

Of course, the management of swarming in out-apiaries, in connection with getting as much surplus as possible, is the kernel of the matter. I will put it in the form of a concrete question, and if that can be satisfactorily answered, the question in general will be settled, and, inci-

dentally, much information elicited which will be valuable to the man with two apiaries or one apiary. The question is this: Can one man without any assistance do all the work inside of seven months of properly running 300 colonies in three apiaries for comb honey?

The answer to that question must not be based on any particular form of hive. We cannot afford, at present prices of honey, to buy new hives for the bees we have, or for the colonies we pick up here and there around the country, unless these are in very undesirable hives.

I have tried dequeening, but am not satisfied. It involves finding a great many queens, and cutting a great many cells, when time is very valuable. Besides, I want brood at that time, to rear workers for the second crop.

I tried a plan once for natural swarming on 15 colonies, and liked it very much, which I think, could be readily applied to artificial swarming. Extra hives are necessary. The swarm is hived in the new hive on the old stand, and a day or two later the old colony set on top of the new hive and super, with a board between containing a little perforated zinc to allow the bees to pass up and down, and a bee-escape communicating with the outside to allow the drones and young queens to get out; and this upper story is kept there until all the brood hatches. That settles the question; there are no queens to find, no cells to cut, no after-swarms to hive, and the whole strength of the colony is kept together. I think it might be simplified by having no zinc or bee-escape in the board, but simply an outside channel, large enough for ventilation, connecting the upper hive with the entrance of the lower one. I have not tried the latter arrangement just for that purpose, but I have tried it on a large scale for a bee-escape, using a small channel, and it workt well.

But the details of the plan are unimportant. That the principle is a success is shown by the experience of F. and H. Rauchfuss with a device by which the hives sit side by side instead of one above the other. The objection to this class of plans is that extra furniture is necessary. But from such experience as I have had with both, I like the idea better than dequeening.

In order to get rid of the extra devices, Mr. H. Rauch fuss now prefers a plan which he described in the convention last year, which came at such a time in the proceedings that it was not appreciated as it should have been. I will therefore briefly describe it as a representative of another class of plans, those which involve requeening:

Shortly before the honey-flow the queen and two frames of brood are put in an upper story with an excluder between, and the upper story filled out with empty combs. The vacancy below is filled with frames of brood and bees, taken from some colonies reserved for the purpose. Nine days after, the upper story is removed to a new stand, all queen-cells cut from the lower story, a virgin queen is given to the latter, and a super put on.

There are certainly no objections to the results of this plan; it is bound to be successful, and has been proven to be. But it involves finding of queens, cutting of cells, and queen-rearing. To be sure, the cell-cutting, in this case, is not a serious matter, for not so many bees are in the way as by the ordinary plan, and all cells are cut instead of all but one, so that the bees can be shaken from every frame. But 300 queens are to find, and 300 queens to rear. These are trifles for Mr. Rauchfuss, but I suspect many would be glad of a modification which would enable them to work in a little different way.

Finally, there is a class of plans which consists essentially of removing or shifting sealed brood. Mr. Hutchinson has told us in the Review how a bee-keeper of Michigan, Charley Koeppen, manages five apiaries of 50 to 75 colonies each on this plan, with the help of one man for about three weeks during the swarming season. This is not exactly what we want, for we want to know how to do it with no help. Few can afford to hire. But it may be suggestive. He puts empty combs in the center of the brood-nest just before the flow. A week or ten days later the combs of sealed brood in the center are shifted to the outside, and the outside combs, which are largely filled with honey, are moved to the center. Then at the beginning of the basswood flow he overhauls them again. I suppose if we were imitating his plan we would make it a week after the last round. This time he takes away two combs of bees and brood from all strong colonies, filling the vacancy with empty combs, and makes nuclei with the brood removed, giving each nucleus a queen-cell, of which there are plenty to be found in overhauling the colonies. All queens are clipt. With this management, Mr. Hutchinson says there is practically no swarming. Upon reaching an apiary, if there is not time to go over the whole number of colonies, the strongest are selected.

Mr. Brock, of our Association, has followed a plan something like this for 20 years, and always secured good crops. However, he runs only two apiaries, and we want to run three.

Circumstances will probably compel me to adopt a combination of plans. The trouble with most of these schemes is that they require extra hives. As honey-prices now are, we cannot afford much even partially idle capital, in the shape of hives, not about every one occupied by bees all the year round. I cannot answer the question certainly in my own mind, whether an average man can run 300 colonies for comb honey without assistance, and do all the work inside of seven months. A few smart men do. Quite a number attend to two apiaries with ease. But I think there is a possibility, that by attentively considering and weighing all methods heretofore given, the average man may evolve one suited to his particular case, which shall be successful.

In order to help him out, I ask every one here who has had experience with out-apiaries to give the method which with him has proven most successful and consumed the least time; and not only that but to think and experiment about this matter during next season's work. It is one of the most important problems which confront modern bee-keeping.

F. L. THOMPSON.

Mr. Pease—Why that number in three apiaries?

Mr. Thompson—I put it that way merely to avoid bringing in the question of overstocking.

Mr. Foster—How many have made a success of non-swarming, that is, so that the swarms do not come out and alight on the trees?

Pres. Aikin—I have been managing three, four and five apiaries with a minimum of swarming.

Mrs. Rhodes—We had 60 colonies in chaff hives. We opened them early, and gave them plenty of room. The first season we had no swarms; the second season, three or four. We gave 24 frames altogether, and ventilated by raising the cover.

Mr. Foster—I have succeeded as far as I have gone, by watching, and when likely to swarm soon I either divided a colony or gave a large amount of room.

Mr. Adams—I have no particular method. It depeuds upon a great many things—room, ventilation, weather—getting bees to work in the sections is the main thing. Occasionally one can't control the swarming impulse.

A Member—When bees get warm, will it bring on the swarming-fever, without a crop of honey at the same time?

Mr. Adams—The bees get warm beeause they are crowded.

F. Rauchfuss—How do you give room?

Mr. Adams—Just by giving room—just adding more.

F. Rauchfuss—You must have a different strain of bees.

Mr. Adams—Yes, I have a non-swarming strain. I had 4 to 8 percent of swarms in the last seven or eight years.

Mr. Carlzen—I had 2 to 2½ brood-chambers to the colony. I took away all the sealed brood possible, and put on supers when the honey-flow came.

F. Rauchfuss—We have practiced dequeening, but did not like it. But we gave young queens or hatching queen-cells just before the inclination to swarm. It is hard to rear young queens at that time of year.

Mr. Pease—Did you destroy the old queens?

F. Rauchfuss—We kept the old queens as a reserve stock, in nuclei of one frame of hatching brood each.

Mr. Gill—I have not prevented swarming. I have 234 colonies in the home apiary, and two apiaries outside. One bee-keeper can attend to the work, but he has to have a wife. I make the strong ones swarm early, and have been successful, using the 8-frame hive. From every colony that shows an inclination to swarm I remove a frame, and let them build a little comb, and get them started in the super, and keep the bees engaged. Worthless queens are killed and others given. Starters are used indiscriminately. Supers are removed from one hive to another, with bees in them, so as to give the other bees an object-lesson, and show them they can keep at work, and empty supers placed on the hives they were removed from. I soon have all the bees at work in supers. Last season I had 30 swarms in the home yard. I have little faith in dequeening for comb honey, tho it is all right for extracted.

Philip Large—I do not try to prevent swarming, but have no more swarms than I need. I had 16 or 17 swarms from 195 colonies, mostly in 10-frame hives.

[Concluded next week.]

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Extraordinary Yield of Honey-Dew in 1898, as reported from all over the world, is mentioned in a "straw" in Gleanings with the remark, "Perhaps honey-dew was no more plentiful than usual, but the scarcity of floral nectar made the bees store what in other years they neglect." To this the editor replies:

"Perhaps; but when there is honey in plenty from the fields, I have noticed that the sidewalks under the trees are not spotted by the spray of the honey-dew as they are during those times when honey is scarce. Is it not possible that Nature has so provided that, when nectar is not secreted in the usual way, because of certain conditions of atmosphere, those same conditions are favorable to the secretion of another form of saccharine matter, or, rather, to the growth of certain insects? You know there is a wonderful harmony in Nature. The all-wise Creator has in many ways made one hand to help the other."

Honey for Nervousness. In a German bee-paper is related the case of a lady who for nine years had been badly afflicted with nervousness and insomnia. One night after a liberal feast of honey she went to bed with her sleeping-powders near at hand, but she went to sleep, forgetting all about her sleeping-powders, not waking till the sun was up the next morning—a thing that had not before happened for years. Altho this might not happen in every case, there might be other cases in which the same results would be obtained.

The Pure Food and Drug Congress which met in Washington, D. C., last month, is an organization in which every honey-producer should be intensely interested. Mr. Abbott gives an article on page 99 that should be read by all our subscribers. No better delegate than he could possibly have been sent to represent the interests of bee-keepers. We trust that Mr. Abbott may be able to attend every meeting of the Congress, and help carry through the Bill under consideration, which is of such vital importance to every lover of pure food—yes, of vital importance to everybody who has a stomach to put food into.

The officers of the National Pure Food and Drug Congress are these, whose names we count it an honor to record in the columns of the American Bee Journal:

President—Joseph E. Blackburn, Columbus, Ohio. 1st Vice-President—Frank Hume, Washington, D. C. Corresponding Secretary—Alex. J. Wedderburn, Washington, D. C. Recording Secretary—Franklin Dye, Trenton, N. J. Treasurer—R. N. Harper, Washington, D. C. Executive Committee—Dr. William Frear, State College, Pa.; W. S. Thompson, Washington, D. C.; L. M. Frailey, Camden, N. J.; F. J. H. Kracke, New York; W. A. Withers, Raleigh, N. C. President, First Vice-President and Secretaries are ex-officio members.

In addition to the above there is a Vice-President for each State represented, the District of Columbia, and one for the United States.

The Cylindrical Hive is one of the latest things in Europe. It looks something like a section of a log lying on its side, with four legs stuck into it—or like a barrel churn. It is about 2½ feet long and contains 20 circular frames, each comb being contained in a hoop having an inside diameter of 14 inches.

Box-Hives in France, as well as in Germany, are used much more than in this country. In a list of bee-books offered by L'Apiculteur, a prominent French bee-journal, 16 give instruction for box-hives and 15 for frame hives.

A Plea for Candied Honey.—There are some who prefer honey in the candied state, and Gleanings thinks this taste should be encouraged. The editor likes candied honey on bread and butter because he can "put it on thick." An employee with a mustashe likes it because it doesn't smear his mouth so much. The editor says:

Suppose you try an experiment in your own family. Put three kinds of honey on the table; and if the candied has not been on the table for a mouth back, just see how quickly it will be taken in preference to the other two.

As you meet your customers, always mention your candied honey. Ask them to try a sample. You will be surprised to see how they will call for more.

I think the main reason why the candied article does not sell in the open market is because the average consumer imagines it is "sugared," or not pure in that form; but if he once understands that it is genuine, honest honey, we shall see a markt demand for honey in that form in the markets generally.

Again the Comb Honey Yarn.—This time it is the Farmer's Voice that is helping to injure bee-keepers. Mr. Walter S. Pouder, of Indiana, sent us the clipping, which we forwarded to General Manager Secor, who wrote at once as follows:

FOREST CITY, IOWA, Jan. 19, 1899.

TO THE EDITOR OF FARMER'S VOICE, Chicago, Ill.—

Dear Sir:—I notice in your issue of Jan. 14, page 50, current year, this paragraph:

"It is almost impossible to buy pure honey. Even honey in the comb is adulterated. A syrup of glucose and dissolved sugar is fed to the bees, and they fill the combs as with honey, but it is inferior."

I am sorry that a paper of the recognized standing and ability of the Farmer's Voice should be the medium of extending a popular belief to the injury of a class of rural economists and co-workers in agricultural pursuits.

This matter of adulterating comb honey by feeding bees glucose is not new, and I fear some people believe it because they see it repeated in the papers. But from my knowledge

of bees, gathered in 25 years of practical work with them, I am led to conclude that some one is drawing on his imagination for his facts when such a statement is publisht.

I have never seen a pound of comb honey which I thought did not come from natural sources, and I have acted as judge at two international exhibitions, and at State fairs, besides inspecting honey in the markets for many years.

I fear that some retail grocers discredit comb honey put up in the best shape, for the purpose of working off the poor stuff they have on hand.

It is the opinion of all bee-keepers whom I know, that have experimented along this line, that bees will not touch glucose syrup unless compelled to by necessity, and then they would not be in proper condition to store surplus.

The colony must be in prime condition—prosperous, full of bees of all ages, and increasing in numbers before they will go outside the cluster to store honey. If there is not plenty of food available which they like, the condition above described will not be present, and, therefore, if they did have access to glucose syrup and nothing else, they would not be in condition to use it profitably.

Now, in defense of my argument, I wish to introduce the testimony of a couple of men who are bee-keepers. These statements were made before the National convention of bee-keepers last fall at Omaha, in answer to the question, "Is comb honey adulterated?"

Mr. Danzenbaker, who is a large bee-keeper near Washington, D. C., said:

"I don't think that bees will take glucose and put it into comb. Some years ago the Secretary of a glucose manufactory boarded with me. There were bees in the yard, and he took great interest in them. It was a hobby with him. In the early mornings he would be out there and have the hives open, and I found out that he was experimenting with glucose. He brought glucose and put it into the tops of the hives. I wondered what he was doing, and I found the glucose there. The bees would not take it. Then he took the best glucose sugar and put it in, and the bees wouldn't take it. It was during the honey season, and he thought the bees would mix with it the honey that was coming in from the field. He meant to keep bees. He imported a lot of Italian queens, and was thinking of making honey out of glucose, but the bees wouldn't touch it. I believe that the acid in the glucose would finally kill the bees. They have an instinct of sense that enables them to detect it."

Mr. George W. York, editor of the American Bee Journal, and President of the Association, added:

"I would like to give one instance of feeding glucose to bees that I know of. Mr. Grabhe, some years ago, was interested in bees with Mr. Perrine, in Chicago, who was one of the biggest adulterators in the State at that time. They moved two or three hundred colonies to Mississippi, and began feeding glucose, and it was scarcely any time at all until they had killed all their bees."

Now, if I have not occupied so much space as to rule me out of your columns, I hope you will give this reply the same publicity which the offending paragraph enjoyed. I might add, that the Association which I represent is using every possible means to bring to justice those who adulterate or contaminate the foods which we consume, especially honey; and we hope that the great State of Illinois will speedily pass such a pure food bill as will enable us to get after the adulterators of food products, whether they be bee-keepers or mixers in the cities. Yours truly,

EUGENE SECOR.

We are again delighted. Mr. Secor answers the offending papers in such a complete way. It must do good in this instance, as in the case of the New York Evening Post several months ago. If we bee-keepers will just follow up this plan for awhile—of letting a little light on honey into the benighted heads of some newspaper correspondents and editors—it must result in overcoming, in a measure, the evil effects of the comb honey misrepresentation that was let loose on the public some 15 years ago. We believe the United States Bee-Keepers' Association is doing a great work when it keeps close after the offenders in question.

To take Grease Out of Cloth.—Make a mixture of the following parts by weight: Alcohol, 8; honey, 6; soft soap, 5; water, 5; wet the cloth with the mixture; rub lively; rinse in clear water. The mixture can be kept a long time if tightly closed in a bottle.—Mode Francaise.

"Queensound" is a word proposed by L. Kreutzinger to signify that a colony is all right as to having a good laying queen.—Gleanings.

MR. I. GORDON, of Dodge Co., Minn., writing us February 9, said:

"I get 'value received' in every copy of the Bee Journal. I could not get along without it and keep bees."

* * * * *

MR. W. BISHOP, of Otero Co., Colo., wrote us Feb. 4:

"It is cold, *cold* weather for colorado. I suppose the bees think so, as snow has been on for a week, and storming most of the time."

* * * * *

MR. M. F. MAYER, of Green Co., Wis., wrote us Jan. 30:

"I like the American Bee Journal very much. I have had bees for several years, but could not produce honey to sell until I began reading the Journal. Long live the 'Old Reliable.'"

* * * * *

MR. R. C. AIKIN, of Larimer Co., Colo., President of the Colorado Bee-Keepers' Association, wrote us Feb. 7:

"This is awful weather: terribly cold. The past six mornings from 20 to 40 degrees below zero, averaging not less than 25 below each morning for the past week, and seldom much above zero during the day. We have had it below zero every day for about 10 days—I fear for bees—all out-doors in this country. Lots of snow here."

* * * * *

THE LEWISTON (ME.) JOURNAL is one of the leading eastern newspapers. In a recent issue it had this appreciated paragraph:

"The weekly American Bee Journal, of Chicago, enters upon the 39th year of its existence with the number for Jan. 5. It has well earned the sobriquet of the 'Old Reliable.' It is perhaps praise enough to say that Bro. York is the man to keep the Journal up to its previous high standard and abreast of the times in apicultural progress."

* * * * *

"HASTY SAYS GOOD-BY," is the ominous heading to an item in the Bee-Keepers' Review in which E. E. Hasty says he is compelled by the great amount of reading involved to close the series of "Views" he has been giving continuously in that paper for the past ten years. There must be something a little out of order in the mind of any reader of the Review who will not join with the editor in his regret at the necessity for such a step. Mr. Hasty has always had such an unfailing supply of good-nature, delicious humor, and upright and downright integrity, that the readers of the Review will sorely miss him.

* * * * *

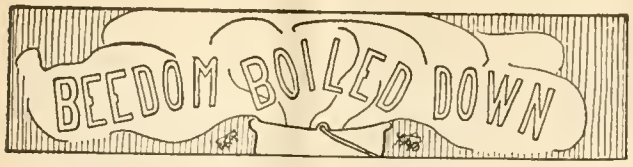
DR. PEIRO, when on his visit to the Pacific Coast awhile ago, called on Mr. E. S. Lovesy, of Salt Lake City, Utah, President of the Utah Bee-Keepers' Association, and writes thus concerning him:

"I occasionally notice some practical, hard-headed facts regarding bees from the pen of Mr. Lovesy, which vividly reminds me of the delightful visit I had with him in Salt Lake City. I found him ensconced in his charmingly embowered home busy ministering to the comfort of his bees. He explained, among other thoughts of interest, that he was trying to circumvent the predatory instincts of the ants which greatly abound and as greatly annoy his colonies. Just how he has succeeded I am unable to state, but judging by the intelligent determination evinced, I suppose he has succeeded in his purpose.

"I much regret that my allotted stay in that beautiful city of saints did not permit me the pleasure of accepting his very kind hospitalities, but my gratitude to him and his good wife is none the less.

"Under the guidance of another friend I visited many of the noted places of interest there, even to taking a bath in the famous Salt Lake itself. This was one of the most singular and delightful experiences of my trip toward the setting sun. A very interesting chat with Elder Snow was exceedingly gratifying.

"*Auf wieder sehn!*" DR. PEIRO.



Repairing Bruised Comb Honey.—When a hole is puncht in a nice section, E. A. Emmons makes a case-knife quite hot on a stove, then smears it over the hole, which covers it with a coating of wax. If the hole is very large, a bit of white comb from an unfinisht section is dropt on.—Gleanings.

To Drive Bees Out of a Hollow Tree, put under the cluster a bunch of cotton-batting saturated in dilute carbolic acid. The odor is insupportable to the bees, and they will soon be clustered on the outside of the tree. If the entrance is above the cluster, bore a hole at the right place to get the carbolic acid below the cluster.—French Journal.

Queen-Excluders Hinder, according to evidence given in the Progressive Bee-Keeper, by F. L. Thompson. They restrict workers as well as queens, dead workers being found on top of the zinc, and a screen door composed partly of excluding zinc, altho it allowed bees to get out, did not admit robbers when robbing was rampant.

Carbolic Acid in Place of Smoke has been used much in England and Europe. A writer in L'Abeille et sa Culture says that bees conquered by the odor of the acid allow themselves to be handled or brusht without much resistance, and the odor of the honey being overpowered by the odor of the drug, the robbers are not troublesome, so the bees are less irritated and more tractable.

The Laying of a Young Queen.—The young queen always lays her first eggs without any order. She travels over the combs and lays at random. Upon a large comb I counted 13 sealed cells, and not more than three of them were together. The first eggs are generally found on the comb that contains the cell from which her young majesty issued, and it is only later, when the laying becomes abundant, that it becomes more regular.—Pfalzer Bienenzucht.

Foul-Broody Honey; How long shall it be boiled?—In reply to a question some time ago in this Journal, Dr. Miller said that to make it safe to feed to bees honey taken from a colony infected with foul brood, the honey should be brought to a boil and held there not less than 2½ hours. Critic Taylor insisted 15 minutes was ample, and Editor Root endorst the idea. The latter has changed his views, and has now become more radical than Dr. Miller, for he says, "I believe one will be taking risks if he feeds such honey if it has been boiled less than *three* hours."

"**Propolis is Often Mixt with Wax** when it is used," says Editor Hutchinson. D. W. Heise showed him a cake of wax secured by repeated meltings from chips of propolis, altho it had a strong odor of propolis. Editor Hutchinson thinks we are losing a little wax when we throw away the scrapings of sections.—Bee-Keepers' Review.—Why, haven't you often seen bees packing on their legs scrapings of wax found out-doors, and what else is done with such wax but to use it for propolis? And don't you know that the analysis of the lamented Dr. Planta showed more than half of ordinary bee-glue to be beeswax?

No-Bee-Way Sections are not viewed with favor by the editor of the Canadian Bee Journal. He thinks whatever advantage there may be in the open separator may be had with the old style of sections. Jacob Alpaugh makes fences with tin for the upright parts, and these are used with old-style sections. At the Toronto exhibition plain sections took no prizes. Sections of the ordinary kind shown there beat the sections shown by Danzenbaker at Buffalo. To the claim that plain sections will cost less for shipping-cases, he replies that different shipping-cases will create confusion.

"**The Origin of Foul Brood** is found in a fermenting mass of neglected dead animal matter and excretions, combined with the presence of a weakened colony, breeding and feeding amongst, and warming up to blood heat such neglected matter, which they in a deteriorated state are unable to remove." This is the dictum of S. Simmins, editor of Bee-Chat. He disclaims any belief in spontaneous generation, but thinks the initial germ of foul brood is present in all healthy colonies, ready to grow whenever circumstances are propitious. He suggests that the primary seed is so infinitesimal that no scientist has so far discovered it. Inspector McEvoy is at least partly with him in his belief—a fact he mentions with apparent pride. Scientists who have produced the bacilli from the spores will hardly agree with the view that the primary seed of foul brood has not yet been discovered.

Bees and Fruit.—In Bienen-Vater are given results of some experiments in which netting was put over branches of trees at time of blooming. The time of blooming of blossoms on such covered limbs was prolonged as if the blossoms were waiting for the bees to fertilize them. On apple-trees the time of such blossoms was prolonged one to three days more than the time of blossoms uncovered. Pear-blossoms were prolonged four to five days; plum, four to seven days. No fruit set on the covered apple branches. Some fruit set on the other trees, most of it falling prematurely.

The Holtermann Hive-Cover is mentioned in Canadian Bee Journal by D. W. Heise, as a flat cover costing about the same as the ordinary cover, absolutely water-tight, and a good non-conductor of heat and cold. Something in that line has been needed a long time. (If I remember correctly our figures show that this hive-cover cost us more than the all-wood ones. It is cheap, as made by the E. L. Goold Co., because they have a good deal of sheet metal that is used for protecting certain packages, and this metal is practically good for nothing otherwise.—EDITOR.)—Gleanings. Whether it costs more or less, a water-tight, non-conducting cover will be likely to find a market.

The Braula Coeca, or Bee-Louse, is quite common across the water, and is sometimes found on bees freshly imported into this country, but somewhat curiously it never is reported as being perpetuated here. Probably not one bee-keeper in a thousand in this country has ever seen a bee-louse. H. W. Brice says of it in the British Bee Journal:

"What are its means of existence? Is it a scavenger or does it suck the juices of the bee? The latter is, I think, the more reasonable conclusion, but even where the Braula is found in large numbers bees seem but little inconvenienced by them, and they are usually more plentiful in strong colonies than in weak ones. They also have a decided preference for the bodies of queens, tho I have seen them scattered on all bees indiscriminately, tho the body of the mother-bee is, as a rule, the favorite haunt of the parasite. Why this is so I do not say, tho I think they have no choice, and if queens flew daily, as does the worker-bee, she would have just as few braulæ as the rest."

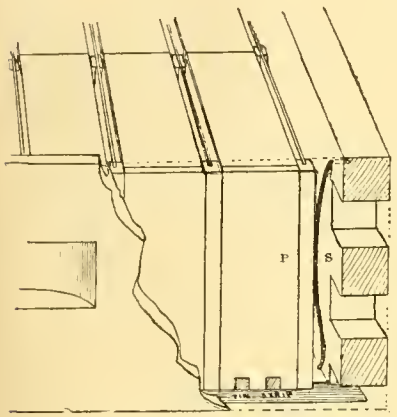
The editor says it seldom lives more than one season in England.

Travel-Stain; what is it?—A thoughtful article from J. E. Crane appears in Gleanings, in which he resents the popular idea that the dirty feet of the bees traveling over the surplus combs are responsible for the darkening of the cappings. He says: "I consider the whole idea of travel-stain as a foul slander. The idea of our illustrious insects not being tidy is infamous." Sometimes bees carry pollen into the hives on their bodies, and this may have some effect in darkening the sections. Bees often use considerable propolis for capping late in the season when wax is scarce. But the chief source of the dark color on sections is the dark wax and old cappings carried from the brood-chamber into the super. One proof of this is that the dark color is not on the surface of the cappings, but the cappings are colored clear through. A queen is removed from a strong colony. All goes well so long as there is maturing brood to seal, but after eight or nine days the brood is all sealed, and yet the hatching bees are throwing off 1,000 to 1,500 cell-caps daily. Not being needed elsewhere, a good share of these cappings are carried into the super to darken the sections. The case is cited of a strong colony thrown on foundation in July, which remained queenless, and after four months the combs, even in the brood-chamber, were as white as the most fastidious dealer could desire.

The Premiums offered on page 62 are well worth working for. Look at them.

Root's Column

It seems to be generally admitted that a means for producing compression on sections when in the super is desirable, and some go so far as to say it is a necessity. If sections and separators are placed in supers loosely, it leaves little interstices or spaces that the bees fill up with propolis. Various devices have been used to bring about the desired compression. Some prefer and use thumb-screws; others, wedges; and still others, tightening-strips. Thumb-screws stick out in the way, and sometimes in damp weather become stuck fast in the holes. Wedges are very often propolized fast, making it difficult to remove them. The same objection applies to tightening-strips, altho to a less extent. We now use two or three springs to our 1899 supers, one at each end, bearing against the ends of the fences, and one in the center. See S in the cut below:



These springs produce a gentle, even pressure against the contents of the super; and, no matter how much the weather changes, causing the stuff to shrink or swell, those springs will produce always a gentle yet firm pressure. After the sections are filled they can be easily taken out, owing to the fact that there is a *yielding* pressure; and propolis—well, it has no show.

In the next Bee Journal we will show you how these springs are applied. Meantime—

KEEP YOUR EYE ON THIS COLUMN,

as it may save you dollars.

The A. I. Root Company
MEDINA, OHIO.

General Items

Bees in Good Condition.

I have 30 colonies of bees, which were in good condition last fall. We had a poor year for bees here; I got only 50 pounds of honey per colony. We generally get 100 pounds per colony. I have kept bees for eight years. I started with two colonies. I have had the Bee Journal two years, and am going to continue taking it. Two days ago the bees had a flight, and today it is 10 degrees below zero. GEORGE WEIS.
Washington Co., Ohio, Dec. 31.

Bee-Keeping for Recreation.

I have taken the Bee Journal but six months, but permit me to say I am much pleased with it. I consider it valuable to anyone keeping bees either for pleasure or profit. My business is merchandising, and I keep bees simply for amusement, and I assure you there is nothing that will drive care from a man's mind, or afford more pleasant, healthy amusement, than a few colonies of well-bred Italians. I have kept bees two years; last spring I had one colony and a poor excuse for another. Nov. 1 I put seven good, strong colonies into winter quarters. R. DAVIS.
Charlevoix Co., Mich., Dec. 30.

Wintering All Right So Far.

Bees here are going through the winter so far in good shape; they had a fair flight yesterday, and are cooled off this morning by a cool breeze with the thermometer 15 degrees above zero. A. A. HOUSER.
McDonough Co., Ill., Dec. 30.

Bees Had a Flight.

Bees are flying today at 44 degrees above zero, and are packt all around with wheat chaff. How is that for not warming up through the packing? I believe the warmth gets in through the entrance. Long live the American Bee Journal!
MICHAEL HAAS.
St. Joseph Co., Mich., Dec. 29.

Have Plenty of Stores.

Most of my bees have plenty of stores for winter, but they produced no surplus worth talking about, and that was of very dark color. One of my colonies stored 70 pounds, and another 80 pounds of surplus. These colonies were right among the rest that seemed quite as strong as they were.
GEORGE SAGE.
Greene Co., Ind., Dec. 31.

Crop Almost a Failure.

The honey crop here the past season was almost a failure. I secured about 600 pounds from 21 colonies, against 1,600 the year before, from the same number of colonies.
CHAS. W. CONKLIN.
Logan Co., Ill., Jan. 3.

Selling Honey—Competition.

Altho failure is reported all around, yet I succeeded in obtaining from 22 colonies, spring count, over 1,000 pounds of extracted honey—all clover and basswood; and also did away with swarming.

As I could give but one day out of the week to my bees all through the season, and then had to come 12 miles to see to them, I think I did fairly well.

I am at present testing a new plan for selling honey, which I believe is going to be ahead of anything I have ever read on the subject (and I have read all in the Bee Journal for 2½ years), for those who are

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

A VALUABLE BOOK ON POULTRY FOR 1899 FREE.
Something entirely new; the largest out; worth $25. to anyone. Tells all you may want to know about poultry. How to build poultry houses and MAKE BIG MONEY with poultry. Send 15c. for postage and mailing. JOHN BAUSCHER, Jr. Box 0

Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

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We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

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A SINGLE SHOT
never won a battle. Steady bombardment with big guns, little guns and rapid fire pieces counts. We have all sorts of ammunition. Write for it.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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Glass Honey-Jars
For 3-4 Pound at $3.50 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.50 per gross; 5 gross, $3.25 per gross. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

Bee-Supplies.
Root's Goods at Root's Prices.
POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.
WALTER S. POUDER,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

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YOUR WAGON WHEELS may need new rings, new spokes or new tires. These repairs have to be made every little while with wooden wheels. Stop all this expense for all time by buying a set of our

ELECTRIC Steel Wheels

They are made with direct or staggered oval spokes, broad tires, any height, and to fit any wagon. They can't rot, go to spokes and need no tire setting—last indefinitely. There is only one thing better, and that is an

ELECTRIC HANDY WAGON.

Our free illustrated catalogue tells all about both and gives prices. Send for it.

ELECTRIC WHEEL CO. Box 10, Quincy, Ill.

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SECOND-HAND

Sixty-pound Cans

FOR SALE CHEAP!

We have about 100 second-hand 60-pound Cans, two in a case, that we offer, while they last, in lots of five or more cases 10 cans at 40 cents a case, f.o.b. Chicago. Better order at once if you want some of them. Address.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

LADIES. If you have superfluous

HAIR ON THE FACE

send for new information how to remove it easily and effectually without chemicals or instruments. Correspondence confidential in plain sealed envelope. Mrs. M. N. PERRY. Box 92. Oak Park, Ills.

Please mention Bee Journal when writing.

THE A. I. ROOT CO'S GOODS Wholesale. Retail.

Including their discounts for goods wanted for use another season. It will pay you to send me st of goods wanted. Cash for Beeswax.

M. H. HUNT, BELL BRANCH, MICH.

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SOLD ON TRIAL!

Buy no incubator and pay for it before giving it a trial. Many people have lost faith in incubators because they bought one that was never intended to hatch chickens—made merely to sell.

The Von Culin Incubators are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c.

Von Culin Incubator Co. 5 Adams St. Delaware City, Del.

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DITTMER'S

Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,

and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

not born agents; and I believe it is also a good plan for them. So far it has been a success, and is so simple I wonder others have not thought of it. After I prove its success or failure I will report through the Bee Journal.

I am trying this plan in the city of Flint, where honey can be found in the stores at all seasons of the year.

At present I have 36 colonies in winter quarters, in good shape.

As I have Editor Hutchinson, his "neighbor Koeppen" with his 370 colonies, and a Mr. Torrey with about 100 colonies, on the west side of me; Hon. R. L. Taylor, with his large apiary, and Rufus Ivory with 76 colonies on the east, and Jones Skinner with about 75, and a man named Doane, with over 200 colonies, on the north, besides numerous small apiaries around me, you see there is plenty of competition.

E. B. TYRRELL.

Genesee Co., Mich., Dec. 19.

Congratulations—Cleansing Flight.

EDITOR YORK:—I offer my congratulations for the success you have achieved as a publisher of so valuable a journal of knowledge and information for the bee-keeping fraternity throughout the world. I hope you will be handsomely remunerated for your labors, and that you may, with the help of its contributors, make the American Bee Journal a mirror in which its readers can see and understand the mysteries of bee-keeping more clearly in the future than they have in the past.

Bees here had a cleansing flight Dec. 23, with no snow on the ground.

White Co., Ind. A. WORTMAN

Credits the Bee Journal for Success.

The American Bee Journal has workt wonders with me in teaching about handling my bees, which did well last season. I took from one hive 110 pounds of honey, half extracted and half comb. I lookt at them last Monday, and they are wintering in fine shape. I owe all my success to the American Bee Journal, as I knew nothing about bees until I commenced to take it.

JOHN A. FLETT.

Hennepin Co., Minn., Dec. 30.

Wintering Well.

My bees had a nice flight to-day, and they are wintering well so far. I have 17 colonies. THEODORE SIMPSON.

Greene Co., Pa., Dec. 28.

Got No Honey in 1898.

We got but a few pounds of honey the past season. We like the American Bee Journal very much; it has been a great help to us, and tho we got no honey the past two seasons we may profit by what we have learned, in the coming season.

F. C. MCCLAIN.

Mason Co., Mich., Dec. 30.

Giving Bees Winter Flights, Etc.

Dec. 29 was a warm, springlike day. Seeing that some bees were flying a little I exposed all the fronts of the hives that I could to the morning sun, and aroused the rest by drumming on their chaff hives and boxes. By noon they were flying freely, and carrying out dead bees. Up to this date my bees had no flight for about six weeks. Now I feel much relieved as to their wintering.

Last winter my bees had no flight for 3½ months, and then I had to take them out of their chaff hives and boxes, and set them on snowdrifts in order to give them a flight. I think bees should fly once a month, and when my bees are compelled to stay in three or four months, I feel quite uneasy. (I mean when packt in chaff hives, or any out-door wintering.)

Many colonies were scant in stores last fall, and no doubt hundreds of colonies will

THE BEST WAY

to make money is to save it. We can save you money on everything in the vehicle line. We make a full line of Surries, Buggies, Phaetons, Spring Wagons, Road Wagons.

WE SELL DIRECT TO YOU From Our Factory At Wholesale Prices.

We have Surries at $51.00; Top Buggies, $35.00; Spring Wagons, $37.60; Road Wagons, $25.00. Excellent Quality Guaranteed.

We Make Every Vehicle We Advertise. We fully guarantee every vehicle we make from the lowest priced up. GOOD GOODS always. An excellent harness as low as $4.80. Large illustrated catalogue FREE. All prices marked in plain figures. Address,

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40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free.

JOHN NEBEL & SON,
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ROCKFORD POULTRY FARM.

FREE! A young cockerel or one setting of eggs to the person suggesting the best name for a Cornish Indian Game cockerel that is taking the first prize wherever shown. We also have a fine lot of Light Brahmas, Barred Plymouth Rocks and White Wyandottes. Send 10c for catalogue. Lice Killer Formula and particulars.

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HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating EXCELSIOR INCUBATOR

Circulars free. Send 6c. for Illus. Catalog.

Thousands in successful operation. Lowest priced 1st-class hatcher made.

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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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EVERGREENS

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 5 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

D. HILL, Evergreen Specialist, Dundee, Ill.

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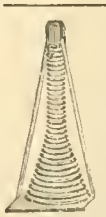


Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

perish in this county alone. Some people, seeing that their bees were scarce in stores killed them. It seems to me that the shortage of bees will be felt as much next year as a short crop of honey was felt this year, and tho a good season may come the honey crop will be short still.

This one thing I have learnt this year: By taking the Bee Journal I could keep trace of the markets and knew how to sell my honey. Some men who take no bee-paper sold their honey for from 10 to 15 cents. I sold mine at from 11 to 18 cents early in the fall, and if I had more I could sell it for 20 cents now.

Through the Journal I also learned to drum out the bees when it is entirely safe for bees to come out. I like the Bee Journal very much, and do not see why some do not want it. Success to the American Bee Journal. D. J. BLOCHER.

Stephenson Co., Ill., Dec. 31.

Bees Didn't Do Well.

I am in the bee-business in a small way. I commenced last spring and got 21 colonies together, and have now 18. Bees did not do very well here last season. I don't think this is a good location for bees. Mine were almost all new swarms, so I didn't expect much from them, but I expect to continue in the business. M. E. BUCK.

Washington Co., Oreg., Dec. 27.

Bees and a Sorghum Mill.

I keep about 80 colonies of bees and get a fair crop of honey every year. I run a sorghum mill about six weeks every fall. The mill is located 15 rods from the bees. The first three weeks the mill is in operation the bees try their best to get at the sap, but I keep a good smoke under the press, and if the smoke is started before the bees start stealing they won't trouble much. If I were not the owner of the mill, and tended to the smoke it would not be safe for man or beast to be near the press. Besides, the bees would store sap in sufficient quantity to give them the diarrhea before the New Year, and I believe it would take only one season for the mill to kill the bees. But the two industries have workt well together for the last 12 years. I have so far not lost more in wintering than others whose bees have no access to sorghum sap. ANDREW CARLSON.

Chisago Co., Minn., Jan. 18.

Wintering Well in the Cellar.

I am wintering 120 colonies of bees this winter, in a cellar 12x40 feet, about 7 feet high. I have wintered them thus for a great many years. I have been living here for about 40 years, and have kept bees about 36 years. My bees are wintering well. WILLIAM FLEMING.

St. Croix Co., Wis., Jan. 25.

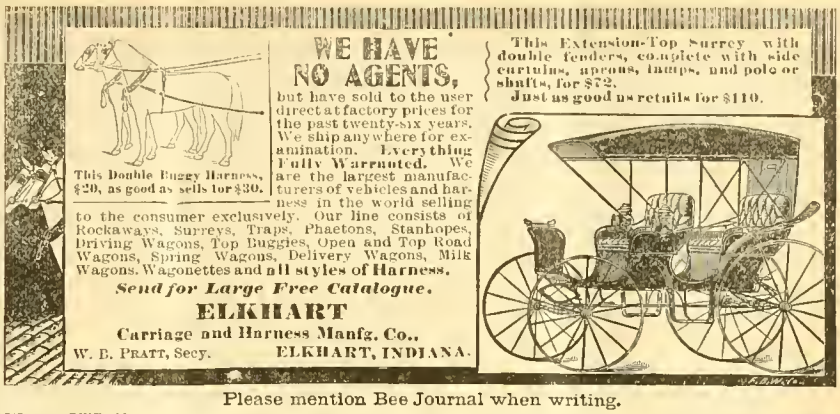
Wintering Nicely—Cold Weather.

Bees are wintering nicely this year with me; very few dead ones. It has been 26 degrees below zero. I see some claim they could not get along without the Bee Journal. Well, I could, but am not going to as long as I keep bees and can get the dollar. JOHN MICHAELS.

Clearfield Co., Pa., Jan. 20.

Stingless Bees in Old Mexico.

I was very much interested in Prof. Bruner's address at the Omaha convention, about stingless bees, as I have two colonies of them in my apiary. They are very different from the ordinary bees as they are about 3-16 of an inch long and are black, except the queen, which is yellow and twice the size of the workers. They work in hollow trees and accumulate quite a quantity of honey—sometimes three or four pails of honey can be gotten out of a hive. The honey has an acid taste, and is very palatable—in fact, a person can eat more of it than of the ordinary honey as it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This Double Buggy Harness, $20, as good as sells for $30.
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Just as good as retails for $110.
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Carriage and Harness Manfg. Co.,
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We make a specialty of making the very best Sections on the market. The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

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with our new patent
KEROSENE SPRAYERS
is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best.
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They have also one of the LARGEST FACTORIES and the latest and most improved machinery for the manufacture of Bee-Hives, Sections, &c., that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the clearest and whitest Basswood is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the BEST GOODS AT THE LOWEST PRICES.

Send for Circular and see the prices on a full line of Supplies.

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has not the sickly taste. The wax is very dark-colored and is used for medicinal purposes. The comb in which the honey is ored is quite a curiosity, as it consists of balls about half an inch in diameter, which are fixt on a stem; then to this they keep fixing other balls, till they make one mass of comb, and in and between fix the brood-comb, which is similar in shape but smaller than the ordinary bee-comb.

My bees are gathering honey from peach blossoms, and seldom miss a day going out, so I am not very much interested in the discussion on wintering bees.

I have also a colony of bees that are between the big or ordinary and the small or stingless bees, but these build in the branches of any tree, and the comb is just like papier-mache, and the honey very sweet.

My hive is 18 inches in diameter.

SAMUEL ANDREW.

Nuevo Leon, Mexico, Dec. 25.

Report from South Alabama.

I thought it would not be amiss to let the bee-keepers in more Northern latitudes know what our bees are doing down South. The winter caught me with 24 hives weak in bees and stores, caused from too much rain in late summer and fall; also from dividing for increase. I am now (Jan. 15) feeding out-doors. I prefer it for several reasons, and none more than to hear that joyful hum in the hive morning and night. They are also carrying a good deal of pollen in. I cannot tell from what source they get it. There is some peach bloom at the present time.

We have a fine climate for bees, but we never have an abundant flow of honey, from tree or plant, as the papers speak of coming from those farther north. By the middle of June our whitest and largest flow is over. We have a good deal longer time to rear queens in, altho I have not tried it yet. SOUTH ALABAMA.

Washington Co., Ala.

An Experience with Bees.

I think it was in 1889 I took the bee-fever, and it came near flooring me. I purchast four colonies of bees in box-hives, and moved them home done up in horse-blankets. They made no trouble, as the weather was so cold that it was sure death to a bee to even poke her nose out. I think it was in February. I believe the "Sage of Marengo" would rather move them in warm weather, but say, Doctor, they are not nearly so liable to sting in cold weather!

I packt the bees in chaff, and procured a dozen chaff hives.

When spring came I transferred the combs and bees into the Langstroth frames. In due time they swarmed, as any well-behaved bees should do, and in two or three years the hives were full; and I would get 300 or 400 pounds of honey every season.

But last spring I decided to get some more hives, and also straighten up what I had, and try to follow orthodox methods. So I got everything ready early in the spring, and knowing that those old hives and frames were in a horrible shape, I transferred the best of the combs and melted up the balance. Some of them were built on starters, and I guess some were started on empty air. Some sheets were tolerably good, and some were every cell drone comb; but I got through with the job, and after the old combs were patcht up by the bees and the full sheets of foundation were drawn out, and every cell worker, I felt proud of them. I honestly believe the old veterans couldn't beat the job themselves.

But just about the time the combs in the brood-chamber were filled it came on wet, wetter, wettest, and our surplus was small. About this time, having previously purchast an Italian queen, I decided to try my hand at requeening; so I hunted up all the authority I could find and sailed in, and at the first pop I got 18 nice cells in a row (I

MAKE MONEY OUT OF POULTRY.

It's easy if you only know how. Our Catalogue and Poultry Guide tells how. Gives the experience, plans, etc., of the best and largest poultrymen of the country. Tells also about THE FAMOUS **CYPHERS INCUBATOR** which is delivered, freight paid to every purchaser. It needs no moisture. Controls this point completely. Possesses the good points of all machines and the faults of none. Buy the book and be informed. Price 10c. The CYPHERS INCUBATOR CO. Box 50, Wayland, N.Y.

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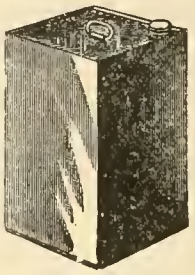
EXTRACTED HONEY FOR SALE.

ALL IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



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This is the well-known light-colored honey gathered from the rich, nectar-laden basswood blossoms in Wisconsin. It has a stronger flavor than Alfalfa, and is greatly preferred by those who like a distinct flavor in their honey.

Prices of either Alfalfa or Basswood Honey:

A sample of either, by mail, 8 cents; samples of both, 15 cents—to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. If ordering two or more cans you can have half of each kind of honey, if you so desire. This is all

ABSOLUTELY PURE BEES' HONEY,

The finest of their kinds produced in this country.

We would suggest that those bee-keepers who did not produce any honey for their home demand this year, just order some of the above, and sell it. And others, who want to earn some money, can get this honey and work up a demand for it almost anywhere. "YORK'S HONEY ALMANAC" will be a great help in creating customers for honey. See prices on another page.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
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Dear Sir:—I have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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They are simple or compound and represent unusual value. For sawmills, well drilling, threshing—anything. Also Threshers, Horse Powers, Sawmills, etc. Catalogue FREE. M. RUMELY CO., La Porte, Ind.

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SPECIAL AGENTS:

E. T. ABBOTT, St. Joseph, Mo.
L. C. WOODMAN, Grand Rapids, Mich.

mean a rainbow), as per Alley. So now I have 18 good colonies in winter quarters, each with a good queen, either pure Italian or hybrid, as I had excellent luck in getting those cells hatcht and queens laying.

One thing in regard to the above I must give you from my record book: Hive No. 19—July 23 I gave unfertile queen; Aug. 2, no eggs; I gave Italian brood, whole frame; Ang. 9, saw queen but no eggs, and gave Italian larvæ as per Alley; Aug. 19 I found full of brood, some brood in several more combs, and four nice queen-cells. Question—Why didn't she go to laying at 8 or 10 days of age, instead of waiting until she was at least 26 days old? L. L. TRAVIS.

Wyoming Co., Pa.

Poor Season—Cellar Wintering.

We had a very poor season for honey in 1898. The worms destroyed most of the basswood blossoms.

Tell "Iowa Joe," who spoke of cellar wintering with bottomless hives (page 695, 1898) that I place a four-inch super under the hive in place of the bottom board, with wire-screen on the bottom side, which keeps the mice from getting in, and the bees from getting out. The dead bees drop down on the screen. My bees winter nicely that way. Leave them thus until you put the bees out on the summer stands, and there will be no loss of bees flying out in the cellar. E. B. LANGDON.

Douglas Co., Minn., Jan. 17.

An Illinoisan in Arkansas.

My honey crop for 1898 was very good for the first year in Arkansas. The spring was very wet and almost all summer, but in the fall we had about 8 or 10 days when the bees and myself put in overtime, as golden-rod and Spanish-needle yielded a heavy flow of nectar, and after 8 or 10 days we got a heavy rain; then it was over for 1898.

I started in the spring with 45 colonies and increast to 70, having hived back about 40 swarms, and about 10 swarms took the traveling fever like a good many Arkansas people do, and left me because I was not able to hive them. I got about 3,000 pounds of nice honey and 100 pounds of wax. I always made my living from bees, and there are eight in my family. I have the American Bee Journal and the Italian bees. Let me have the "Old Reliable," and I am all right. F. J. GUNZEL.

Craighead Co., Ark., Jan. 17.

The Midland Farmer

(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

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Wainwright Building, ST. LOUIS, MO.

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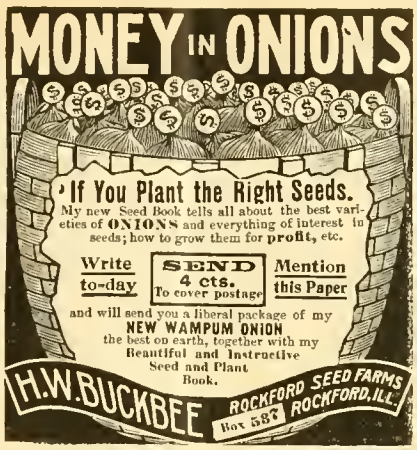
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If You Plant the Right Seeds.
My new Seed Book tells all about the best varieties of ONIONS and everything of interest in seeds; how to grow them for profit, etc.
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Box 587 ROCKFORD, ILL.

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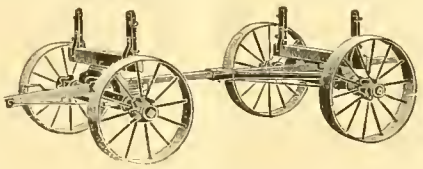
BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel,



which is neater, stronger, and in every way better than wood. Well painted in red and varnisht. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co. Box 10, Quincy, Illinois, for their new catalog, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,

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Headquarters of the Eclectic System.

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WANTED AN APIARIST.

A competent man can secure a position for the coming season by communicating with the office of the **American Bee Journal.** 6A4t

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 9.—The trade is not active in comb honey, many of the retail dealers being supplied with sufficient stock to meet demands for some time to come. Prices are quite steady with 13c for best white, off in color, etc., including amber grades, 10@12c; dark, 9c. Extracted 6@7c for white; amber and dark, 5@6c. Beeswax, 27. R. A. BURNETT & Co.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good, Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, Feb. 1.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

Stocks of all descriptions are light and are largely in the hands of jobbers. At current values, however, not much is required to satisfy the demand. Supplies of Water White Extracted, uncandied, are practically exhausted.

BOSTON, Feb. 8.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No.1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

BUFFALO, Jan. 27.—There is a little more activity on strictly fancy 1-lb. combs at 12c. The bulk of receipts of low grades sell at 10c. down to 7c., and in a few cases even less. A moderate amount can be sold every day. Extracted, 4@6c., according to quality.

BATTERSON & Co.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

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Our descriptive circular and price-list of

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Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. SEND FOR ONE.

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1A13t **Milledgeville, Carroll Co., Ills**

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1Dtf AUGUST WEISS, Hortonville, Wis.

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Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Liberal Discounts to the Trade.

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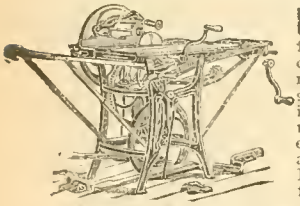

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1 pkt Sweet Peas, 25 kinds	1 pkt Mignonette, Giant
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Cut out this adv. and mail us with four 2c stamps and we will send prepaid above six kinds, with catalogue.

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Why does it sell so well?

Because it has always given better satisfaction than any other.

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We guarantee satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss. PATENT WEED PROCESS SHEETING.**

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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Langstroth on the Honey-Bee—Revised.
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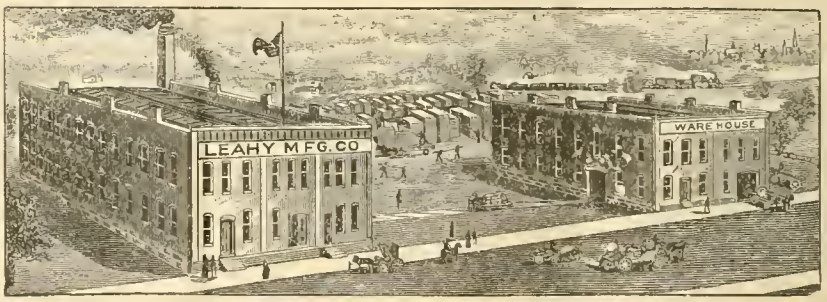

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are made in Wisconsin where lumber is cheap and the best can be obtained. We keep **Dadant's Weed Process Foundation** in stock.

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I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., FEBRUARY 23, 1899. No. 8.

CONTRIBUTED ARTICLES

MELILOT OR SWEET CLOVER.

How to Sow It and Grow It for Hay and Honey.

BY WM. STOLLEY.

I NOTICE that quite frequently Dr. Miller is still bombarded with questions regarding sweet clover, such as, preparing the ground for the planting of its seed, how to plant, how to make hay of it, when to cut it, etc. Now, if the Doctor will not consider it trespassing on his domain, I will touch upon some of these questions for the benefit of beginners, and tell them what I know about sweet clover from experience.

Those contemplating the growing of melilot (sweet clover) as a field crop, may very properly take for it any small-grain-field stubble, or a corn-field, sowing the seed broadcast, and using from 15 to 20 pounds of seed to the acre, without any further prepartion of the soil whatsoever, except harrowing the rather compact soil with a sharp-tootht harrow after sowing.

The sowing may be done at all times after the ripe seed begins to drop to the ground, and from that time on clear into, and during winter, but it should not be done too late in the spring, for fear that a dry spell may injure or destroy the young, tender plant before it has sent its taproot deep enough into the moist soil below.

Of course, seed sown on frozen land cannot be harrowed and thus slightly covered; but this is hardly needed. The tramping into the soil by stock, and the action of melting snow, is all that is required for the seed, if good, to sprout and take root early in the season, having the benefit of all the winter and early spring moisture. In fact, melilot seed sown on country roads, and alongside of railroad tracts, or vacant places, if the seed be good, always gave good results with me. I have tried it, and hereby acknowledge that I am guilty, even if it should be considered a crime.

Those growing melilot as a field crop generally expect to derive other benefits besides a reliable honey crop, viz.: such as pasture for stock, cropping it for hay, or enriching poor and worn-out land. Melilot will do all this, and even more. Melilot is a good and efficient subsoiler.

If a good stand is secured in its first year's growth, it should be cut for hay about the first of July, depending somewhat on the headway it has made by that time; the next cutting may be done about six weeks later on; but do not cut too close to the ground, lest you may risk killing the plants. Leave a stubble of from 3 to 4 inches high, and the plants will not be injured.

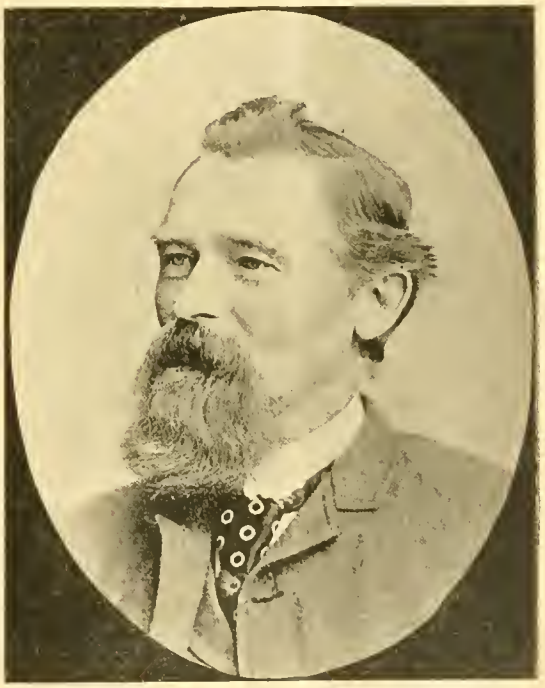
Melilot being exceedingly succulent, requires much longer curing than any other plant utilized for the making of hay. It should remain on the field, as cut, without working or turning it until it is ready to be housed or stackt outside, so as not to lose a large percentage of its leaves, which, when dry, are very brittle, and easily drop off.

It is best, in loading on a wagon, to use a hayloader attacht to the wagon. Thus in 10 or 15 minutes the wagon is loaded, and but one good man is required on the wagon to do the work.

The unloading is also best done with a grabblefork, or, still better, with a so-called "sling." It is very hard work to do the unloading with a common pitchfork.

While housing or stacking a liberal sprinkle of salt should be given on each layer as it is spread out. This will improve the quality of the hay, will tend greatly to prevent heating, and is greatly relisht by the stock feeding upon it.

Melilot must remain in the field to cure at least double the length of time that alfalfa requires, and therefore will bleach considerable; but this bleaching does not in the



Wm. Stolley.

least injure the quality of the hay. It should be workt, when secured, only early in the forenoon and towards evening to prevent loss by waste of dropping leaves.

In the second year of its growth, if hay as well as bee-pasture is the object in view, melilot should be cut not later than June 15, with a stubble from 4 to 5 inches high, and

after that it should be allowed to mature seed. Thus treated here in Nebraska, it will furnish most excellent bee-pasture up to the time when frost kills all vegetation, and sweet clover is the very last to succumb.

For early spring pasturing of cattle, particularly milch cows, there is nothing better than sweet clover. I never knew it to bloat them, altho my cattle have pastured on it year after year from morning to night, when no other plant food was in sight, and while it was wet with dew and rain. Pasturing cattle on alfalfa in the same way would frequently have been with fatal results.

While sweet clover is in no way objectionable on cultivated fields and pastured lands, it is objectionable whenever it gets a foothold on original prairie-grass land which is to be utilized as hay land. By the time that our native prairie-grass is ready for the mower, sweet clover is gone into seed, the stems have become as hard as wood, and thousands of seeds have dropt, thus spreading gradually all over the grass field. Raking together the hay tends still more to scatter the seed broadcast over the infested land, and eventually sweet clover is sure to run out "old America." But, then, the best of us are not free from sin, and why should sweet clover be!

On public highways it is the best plant to grow, if only properly treated. It runs out all noxious weeds, perfumes the air, and feeds the bees; and to the eye of the bee-keeper it looks very nice, even if it should grow 10 feet high.

If cut about the middie or towards the end of June, leaving a rather high stubble, it is dwarft sufficiently in its growth to prevent its becoming a nuisance by growing so high as to cause snowdrifts in winter.

Should a too luxurious aftergrowth follow the first cutting in June, the mower has easy work to lay everything flat late in the fall. That is the way I deal with this useful plant.

A public road, well and evenly seeded down with melilot, but the growth of it properly checkt at the proper time, is a thing of great beauty, and there is nothing bad about it, but, instead, it furnishes a bee-ranch hard to beat, because it will employ the bees until killing frost ends the season.

I am advised that a very extensive sheepman about ten miles north of my farm has seeded down a very large tract of land with sweet clover for a sheep pasture. Very few sensible men, indeed, will nowadays say that cattle, horses or hogs will eat the "blamed stuff," for it has been proven too often that *all of them* will.

I very well remember the time—some 35 to 40 years ago—when this country was still full of Indians, that their ponies would not eat our corn. Well, these animals soon learned to like it much quicker than some men will learn that sweet clover is a good thing, and that there is no serious objectionable feature about it, provided it is handled as it should be handled.

Now, Mr. Editor, I am bitterly opposed to all kinds of monopolies, and therefore I consider it time for me to stop my pencil right here on this subject, so as not to monopolize too much space in your highly-valued paper. I have preserved every number of all the volumes of the American Bee Journal for over 18 years, which fact I think proves best my appreciation of the "Old Reliable." May it ever flourish.

Besides some other topics, I will probably have something more to say about sweet clover later on, if agreeable.

REPORT FOR THE SEASON OF 1898.

It appears that the season of 1898 was not a very propitious one for a great number of bee-keepers. I notice in glancing over the many reports in the American Bee Journal, that many of those who have sent a fair or good report attribute their success princially to sweet clover. So it is with me. Sweet clover as a reliable honey-yielder is "the queen," at least here in Nebraska.

I began the season of 1898, in May, with 22 colonies which I workt for extracted honey, and 5 colonies in the Heddon hive for comb honey, after I had sold about $80 worth of bees.

I obtained 2,890 pounds of extracted honey, and 375 well-capt 4¼ x4¼ sections of comb honey—a total of 3,265 pounds. I increast from 22 colonies to 30, and from the 5 Heddons to but 6 colonies, so I am wintering 36 colonies.

Besides the above, I set aside for spring and June feeding 157 brood-combs, containing at least 550 pounds more of sealed stores, while each colony had not less than 25 pounds of honey to winter on.

I winter my bees in an open shed, on the summer stands, in double-walled hives, all packt inside the hives. The bees in the Heddon hives are, summer and winter, in a suitable vault, which in winter is filled with dry soft-maple leaves. In 18 winters I have never had trouble in wintering my bees.

I obtained a little over 30 pounds of the finest wax from the cappings rendered in a solar wax-extractor of my own make.

The foregoing is my report for the season of 1898. Now, if I had not had sweet clover growing all around me, what would my honey crop have been? Indeed, very little if any at all. One-half of my last year's crop, I may say, was pure melilot, or sweet clover honey, and my fall crop of darker-colored honey is intermixt with melilot and alfalfa so as to consist of about three-fourths of it, while about one-fourth is derived from wild fall bloom, making it of amber color and pleasant taste.

Hall Co., Nebr., Jan. 30.

Something About Queens and Queen-Rearing,

BY DR. E. GALLUP.

AS I promist to give something of my ideas about queens and queen-rearing at the time that I got up the large hives, here goes.

The reader will recollect what I have said about seeing extra-long lived and prolific queens in large hollow logs in a small house built purposely for bees, in extra-large boxes, etc. In consequence of this I had extra-large ideas, and in some way I have never yet seen any reason for changing those wild fancies, as some have seen fit to call them.

Where bees take their own time and supersede a queen at the right season, and in a strong colony, I have invariably had good queens. I removed a queen from one of those strong colonies right in the season, when it was good weather or swarming time, removed all unsealed larvæ, left the sealed brood and only eggs, introduced two frames of eggs from other queens, so I had three frames of eggs in different parts of the hive separated from each other. Now understand I had a large working-force of outside or field bees, and a large force of inside working bees or nurses, yet I went to different colonies in the middle of the day and took out frames of comb with the adhering nurses and shook them down in front of my prepared colony, from several different colonies, until I had a hive running over full of nurses, as the nurses, having never had a flight, staid where they were put, of course the old bees went back. By allowing them none but eggs to start queens from, I did not run any risk of having queens started from larvæ too far advanced as we many times do.

Well, the result was, I had 36 extra-large cells built, and saved 30 of the first lot of queens, and every one turned out as satisfactory a lot of queens as I ever had. I was not expecting so large a number, consequently I was not prepared to take care of them all. You can readily see that having so many nurses and strangers, as it were, from many different colonies, they built large cells, and after the queens hatcht out there was left in each cell a quantity of royal jelly nearly if not quite as large as a common marrowfat pea. So they were reared under the very best possible conditions. That was experiment No. 1.

After removing the first lot of cells and queens I filled up again to overflowing with nurses as before. The weather was still excellent. This time I gave four frames containing eggs, separated from each other in different parts of the hive; no division-board was used, and I had 38 cells built. I lost some of this lot in getting them fertilized, as the weather turned bad. What I did save turned out perfectly satisfactory. I then quit the bees and went into my present occupation.

I tried the experiment again in Ventura county, with a 3-story 10-frame Langstroth hive, and reared 30 good extra ones the first experiment.

I need not tell you that I am in favor of extra-large hives and powerful colonies, both where I lived in Iowa and here in California, either for honey or queen-rearing.

Orange Co., Calif.

Some of the Insect Pests of Cuba.

BY O. O. POPPLETON.

ON page 820 (1898), Mr. Danzenbaker asks me for information about the drawbacks of a life in Cuba, especially the insects found there. This is a rather peculiar subject to find a place in bee-literature, nor will it make the pleasantest of reading, yet it is important that one who

moves into a southern country, should know beforehand something about the annoyances he is sure to meet, and how best to lessen them as much as possible.

There are mosquitoes in Cuba, plenty of them, but they are neither so many nor of so mean a disposition as those we have here on the East Coast of Florida. There are said to be a dozen different species of them in Cuba, but those I got acquainted with were the shyest and most cowardly fellows of their kind I know anything of. They never bothered at all in the daytime, not even in the thickest of brush or in creek bottoms. Always in the evening, when sitting on the piazza, there would be a swarm of them back of us, but rarely indeed would one of them venture to alight on us long enough to bite. The least motion of any part of our person would cause them to dart away to a safe distance. The time when they trouble is after we get to bed, and they can trouble little or none then if one has a good, tight house, or uses mosquito nets over beds. Doors and windows of the houses must be kept screened, or nets used over beds the year round, and care must be taken that no mosquito is inside of the net, after one gets into bed. All such must be killed before trying to sleep.

I was told that the ordinary kind of mosquitoes was very bad at times, close to the ocean, say within half a mile or so of the shore, but, taken all in all, mosquitoes were less of a pest in Cuba than in any other part of the South I have ever lived.

By far the worst pest we found was fleas—the common, old-fashioned, high-jumping fellows. We found it impossible to prevent serious annoyance from these, that is, in the daytime; but we could keep quite free from them at night by not allowing our night-clothing to come into any contact with clothing worn in the daytime; and the more we kept away from any place where any kind of animals was kept, the less we were troubled with them. I am told they can be kept away by the free use of insect powder. If I were going to Cuba I should take a supply along with me.

A pest not found so far as I know in the States, is the Chigoe—the *Negua* of the Cubans. This is a flea, a jumper, black, and so small as to be almost invisible with the naked eye. These fellows burrow just under the skin, usually at the side of one of the toe-nails (big toe preferred), and then proceed to grow into a bag full of eggs. I think that the abdomen of the insect itself distends as the eggs grow in size. I have seen them the size of a kernel of wheat. The first one knows of their presence is a peculiar itching, and an examination will show what looks like a white fester under the skin. A novice will open the supposed fester, squeeze out the eggs, and if wise drop in some kerosene to kill the insect and such eggs as will still remain.

But that is not the thing to do. The egg-sac remaining in the flesh will act like any other foreign body, causing inflammation and suppuration, and a good deal of pain and soreness for a few days. The right thing to do is to take a pin, and by being very careful, separate the entire egg-sac, *without breaking it*, from the flesh. This is not a sore or painful operation to do, but requires slow, careful work, and, if rightly done, leaves no bad effects except a bothersome itching for a day or two. I had only four of these fellows to wrestle with during the two years I was in Cuba, and my wife had two; but the natives, who went nearly or quite barefoot, were troubled very much, especially those who had much to do around where stock was kept.

There are a great many scorpions there—more and very much larger than we have here in Florida. Empty hives are favorite places for them. It was of daily occurrence to kill one or more, but it is rare to be stung by them. I have been stung only once while in Cuba, and once here in Florida. The sting is a little more severe than is a bee-sting, but not much. I think the scorpions found in America are much less venomous than are the Asiatic and African species.

There are said to be no venomous snakes in Cuba, and not many of any kind. Guess St. Patrick must have made a brief visit to the island some time or other, as almost all other tropical countries are infested with poisonous serpents.

I neither saw nor heard anything of either sandflies or bedbugs while in Cuba. These last are found in several of our own Southern States, and are a genuine nuisance, indeed, altho they use few persons as badly as they seem to have done Mr. Danzenbaker. The remedy he gives for them is probably good, but not so readily applied as one we use. It is simply to anoint the lumps caused by them as soon as one feels them, with a preparation called "The Magic Mosquito Bite Cure and Insect Exterminator." This preparation has no offensive odor, and seems to both kill the insects and allay the itching and discomfort caused by their bite; and is much the best remedy I have ever found for any kind of insect bites. It is quite cheap, costing 20 cents per pint, or $1.00 per gallon. It is claimed to be a perfect destroyer of certain insects that sometimes infest houses, but I cannot say as to that from actual use.

Mr. D. misunderstood what I said about foul brood in Cuba. I said, "There was none while I was there;" but I learn through the papers there has been some there since then. I try, as a rule, to write only what has come under my own observation, leaving others to tell what they have seen.

Dade Co., Fla.

COMB HONEY VS. EXTRACTED.

Those Proposed Experiments for Comparative Yields.

BY R. C. AIKIN.

IN the preceding article (see page 67) I treated of a plan to secure a comparative test to find the difference in yield between comb and extracted honey, conditions equal save that the comb-honey colony builds its comb while that for extracted to have combs ready-made. I now continue the discussion.

The experimenter having followed my plan of management up to the harvest, should have every colony very nearly equal in bees, age of bees, and amount of brood in all stages. Having attained this, and the honey-flow on, I recommend to unqueen where the flow is confined to one short season, and so control all swarming (for unqueening method see a later article), and if two flows, or a very long one, to cause all to swarm at same time.

As to management when they do swarm, if all swarm it matters but little what method is pursued so long as all are treated alike. I think, however, that more accurate results will be obtained if the working force be kept together, say by hiving on the old stand and setting the old colony somewhere near to be later removed to a new location, thus adding to the swarm all bees that can possibly be spared from the old one, expecting nothing more of the old one but to fill the brood-chamber and be ready for winter.

As to whether they be hived on starters, full sheets of foundation, or fully built combs in the brood-chamber, I should prefer first full sheets, and, second, starters. It will be necessary to use queen-excluding honey-boards, especially on the extracted-honey colony when full combs are above and starters of foundation below, else the brood-nest would be establisht in the extracting-combs. It would be unwise to put ready-made extracting-combs on at the same time a swarm is hived on starters or foundation, because the bees would so largely take to the extracting-combs as possibly to refuse to build in the brood-chamber. First let the swarm get started in the brood-chamber, and, started there, put on the extracting-combs. The extra may be put on at once if zinc is used and combs below.

Let no colony suffer for room. Weigh off the surplus from each hive, and keep the amount in the colony record. When the flow is over, and all surplus off, weigh each hive to determine the amount of honey in the brood-chambers. Do not forget to find out the *amount* of honey in the *brood-combs*. It is *almost* an invariable rule, that more honey is stored in brood-combs of section-honey colonies than in those run for extracted. The rapidity (freeness) of the flow and strength of the colony have to do with this, and it is no uncommon thing for a section-honey colony to have its brood-combs *packt* almost full of honey, and very little brood, and along side of it an extracted-honey colony having *very much brood*, and what honey-combs are in the brood-chamber not well filled. Brethren, thereby hangs a tale—so *be sure* to find out how much honey is in the brood-chambers.

OTHER EXPERIMENTS.

There is another way to accomplish something definite, and by a method that requires few bees and less time, but requires bees from one location to another. Here is how I expect to to work it:

I shall make a box largely of wire-cloth, say with ends and two sides wood, the other two sides to be of wire-cloth. One end of this will have a hole into which I can insert a large funnel, one large enough that I can shake brood-frames over it and thus box the bees shaken off, by having them slide down through it into the cage. In this way I will draw bees from strong colonies at an out-yard, bring these bees home, thoroughly mix them and weigh out equal

quantities and put into two sets of prepared hives, supplying each of these new colonies with queens hived right in with them. The bees being caged and hauled home in the wagon, and without queen or brood, would be ready to accept almost any queen. To make things more sure I would feed them all the diluted honey (sweetened water) they would take, then the last thing before weighing out the divisions, give them a good mixing, then just let the queen run in with them.

The object in this thorough mixing is to get the bees of different colonies and bees of different ages all one conglomerate mass, all with sacs full, then to weigh out and divide would result in colonies that I *know* are alike. Bees thus handled and hived in the evening would be ready for business the next day, and start out very much as a swarm does. I consider such "swarms" very much less likely to attempt absconding than natural ones, yet, to make sure, I would clip the queens. They must also be considerable distance from each other—far enough so that during the night they will not hear each other call, and pass from one hive to another.

Previous to bringing in these bees I shall prepare the hives they are to occupy. Four brood-chambers will be provided with one or two dry brood-combs, the rest of the space being filled with frames with starters or full sheets of foundation. I would use (at least I think I would) six frames Langstroth size or equivalent, filling the rest of the chamber with dummies.

On two of these hives I would put sections and full sheets of foundation, on the other two put ready-made extracting-combs. An excluder must be under the extracting-combs. The ready-made combs, by relieving the brood-chamber, will allow the colonies under them to rear more brood than those with sections, and to allow the queen to use the extracting-combs for breeding would still further unequalize the colonies.

I will also prepare four more hives, two to have starters only, both above and below, the other two to have complete combs throughout. It may be necessary to keep the supers off this second four hives till work has been begun in the brood-chamber.

There is one common difficulty with all these plans—the unequal breeding. There would naturally be more brood in those hives having the most comb to start with. This could be overcome in a large measure by hiving with virgin queens just hatcht; thus the entire lot would be without brood for about eight or nine days, at which time breeding would come along more nearly equal in the various colonies.

As usually is the case, however, in getting out of one difficulty we get into another. To hive these swarms with virgin queens, they are not so likely to settle down and get regularly to work, and some of the queens are likely to be lost while mating. If all would stay by their hives and no queens be lost, the use of virgin queens would be much the more accurate or trustworthy test.

This would use eight colonies in the experiment. The bees used would be very like new swarms—are forced swarms—yet all are as alike as can be—four brood-chambers just alike, all having one or two brood-combs apiece to form a brood-nest at once. Two of the four must work in sections, and the other two be given unlimited storage-comb, thus making a direct test as to which will store the most.

Of the second division of four colonies, two must build all comb in both brood and surplus chambers, the other two to have full sets of combs throughout so they do not have to build any comb. This second four hives being very opposites—two to build all needed comb, and two to have no comb-building whatever—ought to show quite conclusively the advantage, if any, in relieving a colony from comb-building.

However, to avoid the difficulty of the ones with combs getting a great mass of brood in excess of those having to build, it is essential that one of two methods be followed. They may be given virgin queens as before mentioned, or, instead, they may each be given a comb containing just a very little brood, but no queen given. If given virgin queens they would begin to have brood in ten days, but if given only a little brood to start with, they would be 20 to 25 days in getting new brood started—time to pass over quite a honey-flow.

These methods would eliminate the swarming problem, and surely would give trustworthy data. How many will try it and report? Larimer Co., Colo.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

"CLIMBIN' UP DEM 'GOLDEN' STAIRS."

COGITATOR doesn't deliberately want to "blow cold" on Comrade Golden's side climb-ways (page 33), but the impression produced on his mind is that they call for too much carpenter work to secure a very moderate advantage. The trouble with him is that he doesn't believe bees carry honey upstairs exactly as good little boys carry up stovewood. He cogitates that usually a number of hours pass before the nectar is put into the cells at all. Probably under pressure of a rapid flow a good deal is put into the cells temporarily, to be taken out again later.

BEES THAT "SMELL" THEIR KEEPER.

I rather think Mr. Whitney is running things to extremes a little (on page 36), in claiming that bees know their keeper by sense of smell. It is not *impossible*, however; and in cases where bees are handled very often it is probable enough. I can heartily agree with him (and the rest of the minority) that there is no need to abjure ordinary dark or black clothing when going among bees. If you *want* to dress in white, like an oriental sahib, why do so; but you don't have to at all. Color may make *some* difference.

MANY-HUED CLEOME HONEY.

See the Colorado convention (page 36) for an example of how provoking personal experiences can be when one wants the exact facts. On the question as to what is the color of the honey from cleome (Rocky Mountain bee-plant), some said it was green; others are referred to as calling it purple. Mrs. Booth, you will see, stoutly averred that she never got either green or purple honey, and yet lived in the midst of miles of cleome.

If cleome has such sharp little spikes on its blossoms as habitually tear bee's wings all into fringe, and if bees at work on it die prematurely, we shall not be anxious to have the plant spread in our direction.

SALTING BEES—STARTING RIGHT—RHEUMATIC HOSS.

What an ingenious and easy way of salting bees J. E. Lyon gives on page 37! Just a little salt water on the alighting-board. Some soaks in, and soon all dries up; but the salt is there, against the bees want it, in a shape that it cannot readily get away.

He'll have to wait a hundred years yet—that brother at the convention who wanted to start *right*, and avoid all changing of fixtures and methods.

Eight-frame hives and rheumatism go together in span, it seems from page 38. 'Tator would leave the stable door unlockt for somebody to steal that off hoss.

PREDICTING NEXT YEAR'S CROP.

Good plan for us to watch out and see if "Iowa" (on page 39) is correct, or somewhere near correct, in his surmises. Bad for white clover, and no crop next season, if the fall freeze-up comes when the ground is dry. Good crop assured if the soil is well wet clear down before freezing. Some one will remark that we won't be able to do anything about it. Hardly correct; to be able to predict next year's crop will lead to considerable doing about it.

INDECENCY IN EXTRACTING-MANAGEMENT.

Surprising, and not altogether pleasant to hear, that so old and excellent a bee-man as Oliver Foster lets his extracting colonies have brood in every story (five stories sometimes). Very likely he thinks *he* is maintaining decency in extractting, but one-half the brethren will not, if queens have the run of the extracting-combs. Every few minutes filthy little dabs of larvæ and larval food will fly out into that honey which we desire normally-minded folks to buy and eat as *nice* and *dainty;* but which they wouldn't touch with a pole if they knew the facts. Mr. Rauchfuss promptly reminded the convention that a peculiar thin honey or feed, not fit for extracting (to say the very least)

is usually stored more or less right next to young brood. This stuff, which cannot be shut out, if we allow queens in the extracting-chambers, presumably contains the matter bees pick up about hog-pens and privies. Can we afford to let public indignation hang over our heads like the sword of Damocles—hung by a single hair?

HONEY-SELLING MADE SWEETER BY RELIGION.

Perhaps you noticed that E. T. Abbott (on page 43) says for us not to talk religion when retailing honey. I hardly think Mr. A. meant that as a fling of contempt for everyday religion. In fact, few things are meaner than sanctimonious talk for the purpose of convincing a stranger that he may confide in your honesty—and truthfulness. This rather common meanness is foolishness as well; for it usually increases suspicion instead of allaying it. Also religious *disputes* might waste time, and do harm instead of good. But surely a word of Christ *after business is disposed of* is not a thing to object to. And then there's the familiar honey-seller and the old customer, mutually knowing each other perfectly well, what earthly use is there of restraining conversation on the best-beloved topic of all—providing it is to both the best-beloved topic? And when one or the other says heartily, "Let us pray together before we part"—are you sure, Mr. Abbott, that you could preach a sermon that would do half as much good?

FIGHTING BEE-MOTH WITH ASPIC.

If aspic (page 42, par. 8) is materially better than sulfur to fight the bee-moth with, we shall be wanting to know what aspic is, and what it costs. Killing an extensive lot of larvæ with sulfur is a difficult job.

A LONESOME COMMISSION-MAN.

The only honest commission-man in Chicago, eh? Please don't publish his name. If the public knew of him he couldn't possibly do justice to the business that would come—and then the dear people would denounce him as a rogue. (See page 45.)

BEES HUNG UP IN STRINGLETS.

That frame of bees building comb (on the first page of Jan. 26) is very lifelike indeed; but for the benefit of beginners one may point out two things which are not normal. Comb that bees are at work upon is all covered up out of sight. A slight puff of smoke, or some other means, has been used to get this little comb partly in view. The same cause also has made some of the bees that still cling to the comb stick their heads into the cells—as they were not doing probably when undisturbed in the hive.

"What in the world are they *doing*, hung all up in strings so?" is the question that perennially springs to the lips of spectators. And, as the books and papers seldom or never give any answer, 'Tator will take pity on you and tell you. They are not doing anything. They are just waiting for the forces of Nature, which are within their bodies, to do the work. And the work is secreting little flakes of wax (six for each bee), and at times ripening some honey also.

ANOTHER NON-EXISTENT FACT.

Do extra-strong colonies lose bees proportionally faster in spring than medium ones? If it is a fact, then Mr. Davenport's reasons for it (on page 50) seem sensible. (Bees of the latter all have to stay at home cold days, while from the former they fly, and many perish.) But let us not add another non-existing fact, to be accounted for, to our previous long list.

AMOUNT OF FRAMES TO PREVENT SWARMING.

And Mr. Davenport gives us a cogitation-provoking estimate on a matter concerning which we have few or no previous estimates. Of good comb, well placed, 24 frames the amount needed to make *sure* a colony will not swarm. As an opener, to start an investigation, this is serviceable.

YOUNG QUEEN WITH THE PRIME SWARM.

Comrade Mead's case of a young queen that went with a prime swarm, and left the old queen behind, is interesting, and seemingly genuine. (Page 51.)

DIFFERENCE IN FRONTING EAST OR SOUTHEAST.

On page 52, I respectfully object to Dr. Miller's answer of no difference between east fronting and southeast. We have to *pay for*, in shortened life and labor of our bees, all distressing experiences which they are subjected to—at least so 'Tator thinks. A southeast fronting, when bees are hanging out, roasts the bees from 12 to 2 on torrid days, when in hives with an east facing there would be comfort at those hours. Of course this is not a great thing; but where it is just as cheap to save a trifle as it is to waste, we do ill to bluff the youngsters out of the right path, with our veteran air of "don't-care-a-continental."

SNOW AT HIVE-ENTRANCES—DEAD BEES IN WINTER.

Cogitator would start two conundrums on F. A. Snell's article (on page 51). Are we quite *sure* that a few inches of fresh light snow at the entrance is not a benefit—that is, so long as it does not get solid? Again, if all the bottom except the entrance were three inches deep with dry dead bees (brought from elsewhere), wouldn't that be a benefit to the colony? and can we get dead bees out in winter without doing decided mischief in several ways?

BEES TAKE NOTHING FOR GRANTED.

That was an interesting fact contributed by Prof. Gillette (page 54), that bees before adding to drawn foundation first nibble it all over, so much that its thickness is one-sixth less at that stage than when first put in. Not much inclined to take things for granted, are our bees.

FOUNDATION CONTRAST NEARLY A KNOCK-OUT.

And the final contrast is curious between ordinary foundation and drawn foundation. Bees reduce the base weight of the former from 22 to 46 percent. They *increase* the weight of the latter by 67 percent, mainly with wads of wax stuck in the corners in the effort to get the shape of the bottom more to their mind. The Professor would call the result, on the whole, favorable to drawn foundation—but the 'Tator, he would call it nearly a knock-out, so far as last year's samples go. Just let's wait for the samples of 1899.

COGITATOR.

Proceedings of the Colorado State Bee-Keepers' Convention.

(CONTRIBUTED BY THE SECRETARY.)

[Continued from page 103.]

AMOUNT OF STORES FOR WINTERING.

QUESTION—About what amount of honey should a colony of bees have, to go into wintering quarters with?

Mr. Adams—From 20 to 25 pounds, if in an 8-frame hive.

SPRING FEEDING—SEPARATING SWARMS.

QUESTION—Do you advise spring feeding?

It was suggested that it might pay in certain localities where fruit-bloom had started extensive brood-rearing, and a lull might otherwise ensue. Where there is no fruit-bloom, and sufficient stores are in the hive, bees will ordinarily build up without feeding. Pres. Aikin suggested that the bees be stimulated by extracting the combs, so that they will move the honey.

QUESTION—What is the best method of separating swarms if several or more should go together while swarming?

Mr. Whipple—Shake them on a sheet, and let them run in both hives.

A Member—Scoop some into each hive.

Mr. Elliott—I had read of a plan of having a long box with frames in it suspended crosswise, into which the bees are allowed to run, when they will separate of their own accord. I have tried it, and while it does not work in all cases, it does in a good many.

SEVERAL QUESTIONS ANSWERED.

QUESTION—Is it best to keep hives for wintering close to the ground, or two or three inches higher?

Mr. Honnett—I would advise the higher space, so that mice cannot get in.

Pres. Aikin—They should be high enough for the air to circulate freely, and so that an ordinary snow will not pile up about them.

SWEET CLOVER ON WASTE LAND.

QUESTION—Is there a law requiring sweet clover to be destroyed on waste land?

It was replied that a law including noxious weeds had

been past some years ago, but not enforced, and that the law was probably intended to cover sweet clover.

QUESTION—Suppose my neighbor takes a full case or two from a foul-broody colony, shall he be told it cannot be sold?

Pres. Aikin read Sec. 8 of the foul brood law, which forbids under penalty the sale of such honey.

HONEY LEAFLETS—CONSTITUTION AND BY-LAWS.

A little discussion then took place on the propriety of purchasing a quantity of honey leaflets, printed with the Association's name, for the use of its members. The idea was favored, and the suggestion made that each member could in addition stamp the leaflets he used with his own name.

The committee on Constitution and By-Laws (J. B. Adams, D. A. McLean, and Ben Honnett) made the following report:

"Your committee would respectfully report that after examining briefly the constitution we find that many important matters in it require revision, and require more time than is now at our disposal, and we would recommend that a committee be appointed to do this work and report at our spring meeting."

In accordance therewith, the following committee was appointed: J. B. Adams, A. F. Foster, and M. A. Gill.

GRADING OF COMB HONEY.

The report of the committee on grading, consisting of W. L. Porter, J. E. Lyon, Walter Martin, M. A. Gill, and R. H. Rhodes, was read and adopted. The Secretary requested the reporter to reword portions of it, so as to make it clear without altering the meaning, and in its revised form it stands thus:

No. 1.—Sections to be well-filled, honey and comb white, comb not to project beyond wood, wood to be well cleaned; cases to weigh not less than 21 pounds net per case of 24 sections, but cases in lots must average 22 pounds net.

No. 2.—Includes all amber honey, and all white honey not included in No. 1; to be fairly well sealed, and not weigh less than 18 pounds net per case of 24 sections.

CULLS.—All cull honey shall be sold in the home market.

After the report Mr. Porter exhibited the honey which had been graded by the committee in arriving at their conclusions, setting each section up in turn, so as to be an object lesson in grading.

A section was then handed around which the committee could not agree upon, and a vote taken on its grading. Twenty-eight voted that it should go into the first grade, and ten that it should go into the second. The comb was white, straight, and well filled; but on one side, at the bottom, all of the first row of cells was empty, all but a few of the second row, five of the third, and one of the fourth. The trend of the ensuing discussion was in favor of calling it a second-grade section. It was urged that only a few cells were empty; but the replies were made that then it could not be called well capt, that it is hard to establish rules after going beyond one row of cells, and that another section, which was exhibited as undoubtedly a second-grade section, had no greater number of empty cells, only these were differently arranged, so as to form a patch, and thus be more apparent.

A double-tier case faced with nice white sections, with all varieties of No. 2 and cull honey behind the facers, was next exhibited, and created much merriment. It was markt "From the Rocky Mountain Apiary of Michael Snider, of Rocky Canyon, Colo." Probably but few present realized that it was a hoax, having been prepared by one or two members as an awful example of faced honey; but as such honey has actually been put on the market, it was no exaggeration.

Mr. Pease—I don't see why No. 1 should correspond to Eastern fancy, if we sell to Eastern markets.

Pres. Aikin—My idea of proper grading is No. 1, No. 2, and culls.

F. Rauchfuss—The Washington grading cannot be lived up to. Its fancy grade requires the wood to be unsoiled, and its No. 1 grade that the combs shall be uneven or crooked, or otherwise defective. Now, here is a section with the wood just a little soiled, and the comb perfectly straight, completely capt and white. It is not fancy; it is not No. 1. What is it?

Mr. Pease—Wouldn't the limit of 18 pounds for No. 2 allow pretty light honey?

H. Rauchfuss—Good honey may be light.

F. Rauchfuss—Words do not speak plainly enough. A good many members are absent. The only way better than a description is to have representative combs of each grade photographt, and send the photograph to a bee-paper.

Mr. Carlzen—We have honey that is better than that.

F. Rauchfuss—Then people will get something a little better than they ask for, and there will be no complaints.

By a vote of the convention, the committee were instructed to have a photograph made of representative sections of each grade.

OFFICERS AND COMMITTEES—RESOLUTIONS.

Officers for the ensuing year were then elected, as follows: President, R. C. Aikin, of Loveland; Vice-President, D. A. McLean, of Fort Collins; Secretary, Frank Rauchfuss, of Elyria; Treasurer, Mrs. R. H. Rhodes, of Arvada; Member of Executive Committee, W. L. Porter of Denver.

On motion of Mr. Gill, a committee of three, consisting of M. A. Gill, A. F. Foster, and D. A. McLean, were appointed to draft a vote of thanks to the Secretary for his services, and send the same to the bee-papers.

Other committees were appointed as follows: LEGISLATION—L. Booth, Senator Swink, Col. Whipple, E. Milleson. EXHIBITS—W. L. Porter, M. A. Gill, C. B. Elliott. SUPPLIES—Walter Martin, J. N. Pease, Philip Large.

Resolutions of thanks to Prof. Gillette were adopted for his lecture on foundation, to the Board of Capitol Managers for the use of the room, to the officers for their efficient work, and to the reporter; and other resolutions, also offered by the Committee on Resolutions, that the Association should feel grateful for the unwonted attendance and interest manifested, and for the harmony and mutual feeling between the members, and that the bee-inspectors should be ably sustained by the members of the Association in eradicating foul brood, were further adopted.

The convention then adjourned, subject to the call of the Executive Committee.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Seed of Rocky Mountain Bee-Plant.

Where can I get seed of the Rocky Mountain bee-plant?

AMATEUR.

ANSWER.—The seed-houses ought to be able to furnish it. Write to some of the seed advertisers in this journal.

Small and Large Hives—Queen's Laying.

1. Referring to the controversy in the Bee Journal about small and large size hives, and what a queen is capable of producing in eggs, I would like you to tell which is the more profitable, to give 10 frames to a queen capable of filling them with eggs, or 8 frames?

2. If this queen can keep 8 frames full for four years, would she be worn out in two years on 10 frames?

SUBSCRIBER.

ANSWERS.—1. That might depend somewhat on circumstances. As a general rule it might be better to let her have the 10 frames.

2. I don't believe she would, nor in three years.

Using Sections with Drawn Comb.

Which is best, to put on drawn sections of last year, without cutting them down some, or cut them down, and to what depth? They have never had honey in them.

SOUTH ALABAMA.

ANSWER.—In very rare cases the comb of drawn sections may be so thick that it needs cutting down so the comb will not touch the separator. Generally, however, the only reason for cutting down or leveling sections is because the edges of the cells are soiled or discolored to a greater or less depth. If the sections are of the ordinary kind, with insets, lay a straight-edge across the section and see how

near to it the comb comes. If there is a space of about ¼-inch between the straight-edge and the comb, and if the comb is nice, white and clean, then it doesn't need cutting down at all. If the edge of the comb is soiled, cut away all the soiled part, and no more. You say your drawn combs never had any honey in them. In that case the cells are not more than ¼ or ⅜ inch deep, and unless they have been left on the hive a long time when not needed, they will be clean and not need any cutting down at all. If they are soiled enough to need any part cut away, it's very likely they are soiled clear to the septum and only fit to melt into wax.

Bees Affected with the Diarrhea.

I put my bees in the cellar and two of the colonies are affected with diarrhea. I have put them all outside now. What must I do for those that have the diarrhea?

MONTANA.

ANSWER.—There isn't much you can do for them unless you can give them a good warming up. Perhaps you can in some way heat your cellar for a short time. But better do it at night, for if they get stirred up thoroughly and the least ray of light gets in you may have trouble. If you heat the cellar to 60 degrees or more, the bees will become greatly excited and will run all over the hives, but by the next morning they will be all quiet. To set them out when it is too cold for them to fly will only make matters worse. Better keep them where they are, and hope for a warm day.

Using Musty Hives—Full Foundation Sheets.

1. I have two old hives that I would like to use, but they have a musty smell and I am afraid bees will not stay in them. What can I do to the hives that will remove the smell?

2. Do you advise using full sheets of foundation in frames that will not last more than five or six years?

VIRGINIA.

ANSWERS.—1. If the hives are without any top fast to them, and if your hives with bees in them have loose bottoms, then put one of these old hives under a strong colony as soon as bees begin to fly in the spring, and by the time you want to use it the bees will have it all sweet and nice. If your hives will not admit of that, take the frames of comb out of the hive and let the hive stand a few weeks out in the sun and rain. If you want to make a shorter job of it, wet the inside of the hive pretty thoroughly with kerosene and set fire to it. Or you may scald and scrub the hive. The combs will still be musty, and you can get the bees to clean them by putting one or more at a time in one of the hives with bees.

2. I rather think it would pay to use full sheets of foundation even if the combs lasted only two or three years.

Now it's my turn to ask you a question. What's the matter with your frames that they'll last only 5 or 6 years?

Colonies Suffering for Air.

I am wintering 17 colonies in one end of a hen-house which is partitioned off to about the right size. I left about one inch entrance, and when I scraped the dead bees out from the bottom-board, I noticed an unpleasant odor, as of decaying matter, in some of them. The hive-bottoms are quite damp inside, also, and the bees inside do not carry the dead ones out. Can I do anything for them? Should they have fresh air?

2. What do you think of putting those colonies out early and packing them? If all right, when would you do this?

3. There are some rats and mice in the room with the bees. Do you think they will do harm? If so, how can I get rid of them? ILLINOIS.

ANSWERS.—1. You do not plainly say so, but as nearly as I can make out, the bees have no chance to fly out even if a warm day should come. That's a bad job. From your description the bees are suffering for air. Instead of that 1-inch entrance, open up the entrance the whole width of the hive and clean out the dead bees, doing it quietly to disturb the bees as little as possible.

2. Very likely it might be a good plan to do so the first day the thermometer goes up to 50 degrees with the sun shining. Even at 45 degrees it might do if it is still. You can take one colony out and see if they fly well before taking out the others. But if it's up to 50 degrees and not too windy, the sooner all are out the better. After they have a flight you can pack them, and it might be a good plan to take part in the cellar and see which do best.

3. Yes, rats and mice will destroy the combs badly and eat both honey and bees. You should have closed the entrances with wire-cloth having about three meshes to the inch. That would have kept the mice out. It will do some good to screen them now, for the mice will do more harm to be allowed free run than to be confined in the hives.

Swarming and Double Brood-Chambers.

1. Can you prevent swarming by the use of two 8-frame hives for a brood-chamber, taking one away at the approach of the honey harvest? If not, what percent cast swarms?

2. By what method, if any, do you control swarming other than the double brood-chamber system?

3. What numbers of frames does a colony fill with brood up to the honey harvest with the double brood-chamber system? IOWA.

ANSWERS.—1. No, indeed. About the same number will swarm as if you had used only one story from the beginning, say about 100 percent in a good season.

2. Like a good many others, I'm feeling around in the dark after some satisfactory system, but not sure of anything. *Sometimes* you can prevent swarming by cutting out queen-cells, but you can't depend on it, and it's too much trouble. If you can re-queen your colony with a young queen reared in the same hive, it is possible you will have no swarming; but how to do that satisfactorily is the question.

3. From 6 to 12, counting the frame with the usual border about the brood.

Foundation in Brood-Frames.

1. Does your split bottom-bar work all right?

2. Do you let the foundation come down between the bars? and will the bees not stick it fast and bulge the foundation when it stretches?

3. If you prevent stretching with your sticks, why is not a solid bottom-bar just as good, and let the foundation come down to the bar? SOUTH DAKOTA.

ANSWERS.—1. Yes, indeed.

2. The foundation comes down between the two parts of the bottom-bar. The bees don't stick it fast too soon, for it's held fast before the bees get it. The foundation doesn't bulge because it doesn't stretch. The little sticks prevent stretching.

3. A solid bottom-bar is just as good, if you cement the foundation fast to the bottom-bar. But if the foundation is at all loose from the bottom-bar, the bees will be sure to gnaw away more or less of it and have passages between the comb and bottom-bar. Even if fastened solid they'll sometimes do that. Putting the foundation between two parts of the bottom-bar is rather easier and surer than cementing with melted wax. Besides, you're sure of having the foundation exactly in the middle.

Temper, Hardiness and Beauty of Bees—Re-Queening—Comb from Black Bees.

1. Which is the gentler in disposition, leather-colored or five-banded Italians?

2. Are the golden Italian bees as hardy as the banded?

3. Which is the handsomer, the three or five banded?

4. What will be the price of queens in April? I want to re-queen.

5. Will the comb from a black colony do for Italian bees? I mean will the cells be large enough? KANSAS.

ANSWERS.—1. According to reports there is a good deal of variation among the five-banders, some of them being cross, while others are as gentle as the leather-colored, if not more so. The leather-colored are almost uniformly gentle.

2. Probably Italians having more than three bands are not alike with respect to hardiness, some of them being reported as not so hardy as the three-banders. Others may be just as hardy.

3. That's a matter of taste. To me the five-banders are much handsomer, and likely most would agree in that view.

4. Probably about the same as other years, from ¼ to ½ higher than in June or later. Don't you think it will be pretty early to re-queen in April?

5. Yes, they are used indiscriminately.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. FEBRUARY 23, 1899. NO. 8.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Chicago Bee-Keepers' Association will hold its third quarterly meeting Thursday, March 2, at the Briggs House, northeast corner of Randolph St. and Fifth Ave. Of course every bee-keeper is invited to be present, especially those in this (Cook) county.

Sweet Clover. Mr. Wm. Stolley's article on the sowing and growing of sweet clover will be found in this issue. Read carefully all he says about it, for he has had long and extensive experience with it, both as a food for farm stock and as a honey-producer. We can supply the seed of sweet clover promptly, as shown by the advertisement on page 123 of this number.

The "Feeling" Regarding Apis Dorsata. The American Bee-Keeper says:

"The American Bee Journal says, 'Apis dorsata is strongly championed by the American Bee-Keeper. Since those who oppose it say that it cannot prosper in this land, why need there be any feeling about its introduction?'"

The reply to this shows that the American Bee-Keeper understood the item as an argument against any attempt at the introduction of said bee. Editor Hill, you have clearly misunderstood the drift of the item—a misunderstanding that is entirely pardonable. You understood it to mean "feeling" on the part of those who desire its introduction, in which meaning there would be little sense and less argument. But please look at it in the way in which it was really meant, and you will probably see both sense and argument. The meaning was that there need be no "feeling" on the part of those who opposed its introduction, and the argument might be paraphrased after this style, by those who were not trying to be careful of the "feelings" of the opposers:

"Say, you fellows that are raising such a howl against introducing Apis dorsata, what under the sun is the sense in it? You say it cannot prosper here, will die off right away if brought here, and if it is brought here only to die right away, what harm can that do *you?* Where is the sense in your showing so much 'feeling' about it?"

Lost Numbers of the Bee Journal are being reported as never before—so it seems to us. We can't understand it, for we have mailed them regularly *every Wednesday evening* for years. It must be the cause of the many losses lies with the post-office—after the papers leave our hands. We are glad to replace all lost copies, if only they are reported promptly. We are extremely careful to mail the paper to every subscriber, and if they don't get it, we attach no blame to ourselves. Of course we regret the non-appearance, but can only offer to mail them again when so requested, and before the edition is exhausted.

The National Bee-Keepers' Union.—We have received the following report of the recent election results, from General Manager Newman:

NATIONAL BEE-KEEPERS' UNION.

TO THE MEMBERS:—As many have requested copies of the report of the judges of election as soon as it is made, this is sent for information:

SAN FRANCISCO, CALIF., Feb. 8, 1899.

We, the Committee appointed by the Advisory Board of the National Bee-Keepers' Union to count the ballots cast for the various candidates for the year 1899, submit the following, to-wit:

Total number of votes cast 76.

FOR PRESIDENT—R. L. Taylor receives 44, G. M. Doolittle 16, scattering 14.

FOR VICE-PRESIDENTS—C. C. Miller 50, G. M. Doolittle 41, A. I. Root 40, Eugene Secor 27, C. P. Dadant 27, A. J. Cook 27, J. M. Hambaugh 10, Frank Benton 9, Chas. Dadant 9, E. R. Root 9, scattering 68.

FOR GENERAL MANAGER, SECRETARY AND TREASURER—Thomas G. Newman received 71, scattering 5.

W. A. PRYAL, F. N. BLACKMAN, } Committee.

As the Hon. R. L. Taylor and Prof. A. J. Cook positively decline to accept any office, the following, having received the highest number of votes, are declared duly elected: G. M. Doolittle, President; Dr. C. C. Miller, A. I. Root, Eugene Secor, C. P. Dadant and J. M. Hambaugh, Vice-Presidents; and Thomas G. Newman, General Manager, Secretary and Treasurer.

For 15 consecutive years I have been almost unanimously elected to the office of General Manager, and now I feel that, in justice to myself, this must be the last time that I can accept the office, and therefore request the members to unite upon my successor at the next election.

Realizing that my experience for 15 years will be of value to my successor, I will cheerfully give counsel at any time, or accept a position on the Advisory Board, or take the office of President if it is generally desired by the members. I wish to thank all for this renewed proof of esteem.

Yours respectfully, THOMAS G. NEWMAN,
General Manager.

1429 Market St., San Francisco, Calif.

We wish to congratulate all the successful candidates, upon their election to positions in an organization that has won so many honors in the interest of bee-keeping, and that has been so uniformly victorious for so many years.

Discouraging Situation in Southern California.—Prof. A. J. Cook, writing us Feb. 9, from Claremont, Los Angeles Co., had this to say about the exceedingly discouraging prospects for bee-keepers in Southern California:

The honey situation in Southern California is certainly very discouraging. A drouth last year that utterly precluded honey-production is followed by a prospect of still greater drouth this present season. At Claremont, Los Angeles county, up to the present date, we have had less than four inches of rainfall, whereas we desire 15 to insure

a full crop of honey. Two such seasons in succession are not only discouraging to the producer from the loss of income, but they are disastrous in causing the destruction of the bees.

If we do not get heavy rains from this on—and some of long experience think it is now too late to save the crop even if rains come—there will be a tremendous mortality among the bees. Even one year of honey-dearth is serious, as so many colonies starve, but with two following each other in succession, there will be few colonies left, it is feared, to reap the benefits when good seasons with bountiful rains come again.

Southern California has much to recommend it, but this one drawback of scant rainfall is the one thing that causes foreboding and unrest. It is not the bee-men alone who suffer, but the ranchers and orchardists are also sufferers. A. J. Cook.

Surely, the outlook for bee-keeping this year in Prof. Cook's section of California is very depressing. But all any one can do is to try to "make the best of it," and hold on, if possible. The good seasons will doubtless come again in due time, and those who are able to bide that time will reap the harvest. We know how valueless are simply words at such a time, but if anything can be said that will tend to inspire hope for the future, we feel that it should be said. Let us trust that the rest of the country may have a honey crop this year, and that old Southern California may ere long roll in sweetness again.

Mr. C. P. Dadant, of Hancock Co., Ill., wrote us Feb. 15:

"We have just had a good day for the bees. The colonies are strong, there is next to no loss, and you may say, 'Hurrah for the bees!' They appear to be in splendid shape."

* * * * *

Mr. G. M. Doolittle, of Onondaga Co., N. Y., writing us Feb. 10, said:

"It is blowing very hard here, with the mercury 13 degrees below zero, and as we had about a foot of light snow on the ground, which fell yesterday, all our roads will be blockaded."

* * * * *

The Leahy Mfg. Co., of Lafayette Co., Mo., wrote us Feb. 15 as follows:

"We have been having some very cold weather here—22 degrees below zero. For this part of the country this is extremely cold. Bees will be short in quantity in the spring, as hardly any one in this latitude protects them."

* * * * *

Mr. Thomas G. Newman, of San Francisco, Calif., writing us Feb. 9, reported himself as still in the doctor's care with little evident good. He said the weather there was cold also, but that it is worse for them to have the temperature at freezing than for the East to have it at zero—the air being so heavy and humid at San Francisco. We hope, as will thousands of Mr. Newman's old friends, that he will find relief in some way, and fully recover his health.

* * * * *

Mr. W. A. Pryal, of Alameda Co., Calif. (near San Francisco), writing us Feb. 1, said:

"We have just had the hottest weather we ever had in January; it was for several days 75 degrees in the shade here; in the interior it was even hotter. It has been great weather for the bees. Honey was coming in so fast from the gum-trees that it seemed the bees had a pipe-line from the trees to the hives. Wild blackberries were beginning to bloom; so were the willows. Yesterday a change came; a big wind from the ocean blew in the clouds, and last night it commenced to rain. The weather is now quite cool. The warm weather was a little too good for this time of the year. Vegetation, especially fruit-trees, were being forced along too rapidly; the frosty weather that is likely to follow later would have a disastrous effect upon the fruit-blossoms, or the young fruit. Still, we may have no more cold weather during the year."

* * * * *

John Bauscher, Jr., of Freeport, Ill., has issued one of the finest Poultryand Seed catalogs for 1899 that has come to our desk. It contains nearly 200 pages, is well illustrated, and contains much practical information. He mails it for 15 cents, and for 2 cents extra he will send a calendar. Better write him for both, not forgetting to mention the American Bee Journal when doing so.

* * * * *

Ira B. Travis, son of I. A. Travis, of Walworth Co., Wis., died at Littleton, Colo., Feb. 1, where he had gone on account of ill health, being afflicted with asthma, which, by reason of taking several colds, developt into consumption. "Ira" was only a little over 21 years old, and an exemplary Christian boy, beloved by all who knew him. He was buried at his old home in Wisconsin. The Bee Journal extends sincerest sympathy to the bereaved ones.

* * * * *

Our Advertisers we believe to be entirely reliable in every case. If any of our readers find otherwise, we would consider it a favor if they would report it to us. We do not intend to accept the advertisement of a single irresponsible or dishonorable dealing firm. We hope our readers will extend their patronage to those who patronize our advertising columns, always remembering to mention the old American Bee Journal when writing to them. It will help both the advertiser and ourselves to thus mention this paper.

* * * * *

Mrs. Mate Williams, of Wadena, Minn., is in sorrow by reason of the death of her beloved daughter, Jessie, who was a "noble girl, popular wherever known, and was a valuable helper to her mother in the apiary and elsewhere, as well as a sweet and dear companion." Mrs. Williams is the conductor of the apiarian department of the Farm, Stock and Home, as well as a regular reader of the American Bee Journal. Our sympathy, as well as that of our subscribers, will go out to Mrs. Williams in her bereavement.

* * * * *

Mr. E. Whitcomb, of Friend, Nebr., President of the United States Bee-Keepers' Association, has been delivering lectures recently on bees and bee-keeping, at local farmers' institutes. Of course he created much interest in the subject, just as the newspapers reported. Pres. Whitcomb is right "at home" on bee-keeping. And he can make it lively for his audience. He can dance and sing like an Indian, too. Probably the old Association never had such an all-around president. But he will need all his Yankee and Indian tactics when he comes to preside over the annual convention.

* * * * *

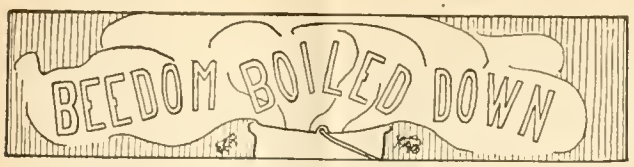
The Von Culin Incubator Company, of Delaware City, Del., have lately reorganized and doubled their former capital, and also added machinery to their present plant that will increase their present output of machines 50 percent. This was necessitated by the increast demand for their incubators in 1898, after they had added to their already high-grade machines their patented automatic ventilation and temperature regulators. It would pay you to send for their large catalog. Their factory is at 8 to 12 Washington Ave., Delaware City, Del. Don't fail to mention the American Bee Journal when writing them.

* * * * *

Editor E. R. Root, in Gleanings for Feb. 1, in commenting upon the improvements in some of their apiarian exchange papers, had this to say concerning the American Bee Journal:

"The 'Old Reliable' comes out with a new title-page, new body type (just like ours, by way of compliment), and one cannot fail to note an added freshness and vigor throughout the whole journal. It is the oldest of all the bee-papers on this side of the Atlantic. It is a weekly, and always on time—the only one, I believe, that can really claim that distinction."

We make our very best bow for the foregoing compliment. Coming, as it does, from one who is so competent to judge, we can but appreciate it very highly, and continue to strive to issue a good bee-paper.



Izal for Foul Brood is championed by Editor Simmins in Bee-Chat, and a number of reports are enthusiastic as to its success.

Hand-Hole Cleats for Hives.—H. R. Boardman and others have strongly preferred cleats to hand-holes for handling hives, and the A. I. Root Co. now announce that they are making a compromise—a short cleat directly over, and continuous with, the hand-hole.

Fruit, Bees and Poultry go well together. The bees, if the weather gives them half a chance, will see that every blossom of the fruit-trees is pollinated during the blossoming-time, and the chickens that have the run of an orchard, particularly of a plum-orchard, are worth all it costs to keep them if they never lay an egg.—Iowa Homestead.

Likes Big Hives but Not Big Frames.—N. D. West endorses most of what C. P. Dadant says about big hives, but is emphatic in his dislike of Dadant's large frames. He used them when first using frame hives; they winter well, give strong swarms, etc., but require a strong man to handle them all day long, and they are bad about breaking down when hauled over rough roads.—Gleanings.

Jamaica Bee-Keeping.—"Christmas pop," a white morning-glory which is the bellflower of Cuba, begins in November, and logwood last of December, the two lasting three months. Nearly all the honey is shipt to London, netting three to five cents. Hives must be at least two feet from the ground on account of toads, which are very large and swallow many bees if they have a chance.—H. G. Burnet, in Gleanings.

Blocking Up Hives at the four corners, together with equalizing and putting on sections early, prevented swarming for Mr. Bruce, as told by F. L. Thompson in a meaty article in the Progressive Bee-Keeper. The only two colonies that swarmed were induced thereto by superseding. But he thinks brood-rearing is hindered by blocking up too early. Mr. Thompson surmises that another reason for the lack of swarming was the much swarming of the previous year, giving so many young queens.

Wood-Zinc vs. Plain Sheet-Zinc Honey-Boards.—J. H. Martin says in Gleanings that the wood-zinc are "infinitely better." R. Wilkin says he has been using the plain sheet-zinc for 10 years, has 700 of them, likes them, and wouldn't take the others and use them as a gift. He takes hold of the plain sheet at one end or corner, peels it off like a sheet of paper, with no snap to jar the bees, and no care to prevent breaking the wooden frame. If curved, turn the convex side up, and the super set on straightens it out.

Stimulative Feeding. Editor Hill, of the American Bee-Keeper, flings this somewhat defiant language at those who oppose stimulative feeding: "The doctrine and practice of stimulative feeding is not as popular as it was some 20 years ago; but, brethren, be it known, that yet a few of its old-time adherents are stalking up and down in the land, and the same satisfactory results are derived through its latter-day application that gladdened their hearts in the days of yore."

He probably takes comfort in the thought that he has a good deal of company the other side the water.

Why Are Large Hives Best? Editor Hutchinson quotes from Gleanings an article by C. P. Dadant with accompanying remarks from the editor of Gleanings, and then says:

"I have no doubt that in Mr. Dadant's locality and management a large hive is better than a small one. He must have found it so or he would use a small hive. Admitting this, I am still at sea as to the *why* of it."

He then brings up various arguments proving that the large hive should be best, and demolishes them one after another, still leaving the question open, and demanding to know wherein he is wrong and what the real *why* is. This Boiler does not want to risk his life between the disputants, but would hint, Mr. Hutchinson, that you either forget, or have not seen, what Dadant has said about where the capital lies. You say it is not in the queens but in the hives and combs. Dadant says it is in the queens. So long as he holds that view, it is *why* enough for him to use large hives.

The Dickel Theory is one that is occupying a good many pages of the German bee-journals nowadays, and now occupies a page or more in Gleanings. The theory was advanced some 10 years ago, and is now revived and vigorously advocated by Editor Dickel. Dickel objects to the Dzierzon theory, and Dzierzon says the Dickel theory is nonsense. According to the Dickel theory, every egg laid by a normal queen is fertilized, and the workers determine the sex by the kind of nourishment given. The editor of Gleanings agrees with Dr. Miller, that it may be well to wait until the battle shall have been fought out in Germany before taking up much time with it here.

Do Bees Freeze?—Of late it has been bluntly asserted, especially in the agricultural papers, that bees never freeze, altho they may starve. Now comes W. Z. Hutchinson in one of the leading agricultural papers, Country Gentleman, and says that when he wintered bees out-doors in single-walled hives without protection, the bees came through in pretty fine condition in mild winters, but "in severe winters the bees in the outside spaces or ranges of combs died first; the cluster became smaller; the bees in more ranges died; and by spring all were dead" or ruinously reduced. It would be somewhat troublesome to show clearly that hunger and not cold was the trouble in such a case.

Large or Small Hives.—A. E. Manum is confident that in a poor season, and in a poor locality, a large hive is preferable to a small one. He says in the American Bee-Keeper: "I find that in a location where the honey season is short, that is, where the main dependence for honey is from clover and basswood, with little or none from fall bloom—nor but little is expected from fruit and other early bloom in the spring—that large hives are preferable to small ones, for the reason that the large hive will admit of sufficient winter stores gathered during the honey-flow coming from 'clover and basswood' to carry the bees through until another season's harvest without resorting to the sugar-barrel."

Out-Door Wintering is the subject of an able article by Editor Hutchinson in the Country Gentleman. He believes in packing four inches at the side and six on the top, using means to make bees fly on warm days if necessary. For packing material, chaff, leaves, planer shavings, dry sawdust. The best of all is cork-dust, but it costs. With a good, strong colony and abundant ventilation above the packing there is no trouble from moisture. To keep the packing in place, boxes of thin, cheap lumber. Can be made to knock down for summer. Or, hives may be in a row with long box about them. He does not believe there is sufficient gain to warrant packing before freezing weather. Have a rim two inches deep under the hive with entrance above the rim. Then entrance can never be clogged. Weak colonies should be put into the cellar.

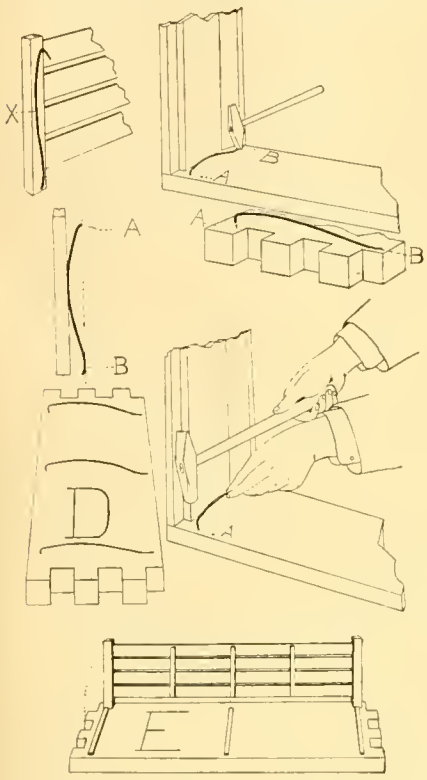
How to Know Honey is All Right for Feeding.—In the Canadian Bee Journal, page 476, appears the following:

"Look out for foul brood. A note of warning has several times been sounded by Editor Holtermann against feeding honey got from other bee-keepers. The safe thing is to feed no honey unless you know it's all right."—Beedom Boiled Down. Please, Mr. Boiler, will you tell us how we may "know it is all right?"

Mr. Holtermann, you must not ask this Boiler to tell how we may know, but ask Gleanings, the one that said it. It might be suggested, however, that we may know it is all right if we have saved it from our own bees or got it direct from some one who we know has no foul brood. But while your ear is at the 'phone, will you please tell us how such a strange metamorphosis came to be made in the item quoted by you? On page 650 (1898) of the American Bee Journal it reads: "A note of warning is sounded in Gleanings," and you quote it as sounded by Editor Holtermann. Do such typographical errors occur in your locality, was the devil fooling with your copy, or how did it happen anyway?

Root's Column

In this department of last issue we showed you our super springs. We now show them a little more in detail, and how to put them in the supers. X is a curved piece of steel wire, one end of which is bent at a right angle, and sharpened. This is driven into the wood at a point that will come opposite the end cleat of the fence when in the super. After this is driven in, the other end is pounded down into the wood, making a sort of groove for the end B to slide in. Three such springs are used in our regular super—two to come directly opposite the end-



cleats of the fence, and one opposite the center cleat as at D, showing super side detacht. On the opposite super side, and spaced in the same manner, are nailed three thin cleats, supplied with each package. These are to keep the outside fence a bee-space from the super side, about the same distance away as the springs do on the opposite side. We put in enough fences so that we have a fence between each outside row and super side. It costs a little more, it is true; but it carries out in effect **THE PETTIT IDEA**, or what he calls his divider—a method by which it is said the outside faces of the outside rows of sections are as well filled out as the faces in the center rows. Reports from bee-keepers last season go to show there is a good deal in this little scheme, and if so it may be worth dollars.

Keep Your Eye on this Column, as it may save you dollars.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Succeeded the Fourth Time.

I tried three times to keep bees, getting no surplus and my bees dying. I bought "A B C of Bee-Culture" and commenced taking the American Bee Journal a year ago. I got 150 pounds of comb honey from two colonies, and no swarms. There was much honey-dew in the first taken off. Dark honey was the general complaint in this locality. The fall honey was very nice, I think, from smartweed.

I am well pleased with the American Bee Journal. EVERETT BANTA.

Cass Co., Ind., Jan. 12.

Bee-Keeping in Jamaica.

My mother has an apiary of 180 colonies which I look after. I want to start an out-apiary of 200 colonies for myself this year. The honey season commenced Christmas day, fully a month earlier than we have ever known it. The logwood (*Hematoxylon campechianum*) our best yielder and choicest honey, has commenced to blossom, and I went to send you a sample later, and get your opinion of it, and see how it compares with clover, sage, etc.

The Cuban vine, so highly spoken of by Mr. Poppleton, at Omaha, is commonly called "Christmas pop" in Jamaica.

Some time in 1899 I will send some of my experiences with the busy bee in the "Isle of Springs." C. R. EDWARDS.

Jamaica, W. I., Dec. 26.

Past Year a Success.

The past year was quite successful with me. I got from 60 odd colonies 3,000 to 3,200 pounds of honey. The best colony stored about 90 pounds and from that down to 10 pounds of clover and basswood. It was just fine honey.

I have taken the American Bee Journal 8 or 9 years, and never have had one number miss. JACOB MOORE.

Ionia Co., Mich., Jan. 5.

A Report from Maine.

I commenced in the spring of 1898 with 34 colonies and increast to 52. They built up well, but until June 15 they stored no surplus; then white and Alsike clover commenced to bloom and it yielded a good deal of nectar. The Alsike kept in bloom until the middle of July when it suddenly stopt. For about two weeks the bees could find nothing to work on, then they found some basswood three or four afternoons; when that source was suddenly denied them, presumably on account of dry weather. After that they scarcely managed to get a living, a little buckwheat and golden-rod yielding sparingly.

Breeding was suspended a good deal earlier in the season than common, and the bees went into winter quarters fewer in numbers than usual. I am looking for some losses this winter and spring, altho mine have plenty of stores, partly sugar syrup, and seem to be all right now on the summer stands.

My crop of honey amounted to 2 250 pounds of comb honey and 170 pounds of extracted.

I never had the boxes filled so full, many of them weighing from one to three ounces over a pound. I noticed most of the heavy ones were in colonies having young queens, and were somewhat in want of room. It could not have been done with older and more prolific queens, I think, as they would have swarmed.

I used five of the dovetail hives with supers of plain sections and fence, the past season, and I am well pleased with them. I did not give them a thorough trial, as I

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and send them our Incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fail with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on Incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.
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GUS DITTMER, Augusta, Wis.

did not get them in time, but I think I have never had sections filled and finisht so fast as those were. But they are all a scant pound to the section—about 14 ounces on an average. For all that, they sell as readily as a section with insets, which weighs more.

We call the last honey season a good one for this part of Maine—the best, in fact, for many years.

I like the American Bee Journal very much, and would not do without it at double its present price.

Penobscot Co., Me. Frank Champeon.

Wintered Well Thus Far.

It has been snowing nearly all day, and the snow is about six inches deep, with good sleighing, for the merry sleigh bells can be heard far and near. My bees had two flights last month, the first they had was the first week in January, and the second Jan. 15; it was quite warm on that day so they had a good flight. I am glad to say that my bees thus far have wintered all right. But February and March are the two months in which bees need careful attention, as this month they begin to breed; however, I am afraid my bees are like the ground-hog that came out last Thursday from his winter quarters only to see his own shadow and then go back to stay six weeks longer. I have not seen anything of my bees since Jan. 15; this makes me think they are like the ground-hog, as they may stay in their house longer than six weeks. So all we bee-keepers can do at present is to carefully read every article in the bee-papers, and get ready for the coming spring by putting comb foundation in sections, painting the hives, etc. W. H. Heim.

Lycoming Co., Pa., Feb. 5.

The "Cake" Goes to Michigan.

Editor York:—You chose wisely when you took back what you said on page 28, for the reason that Mr. Murry has too many "backers." Now for a little sport, that is if you will agree to it.

I will buy of our grocer 1½ pounds of comb honey, cut it out of the sections and place it on a plate with "knife," choose a man to eat the honey, call in six of our best business men for witnesses, and will leave $1.00 with our banker, or send it to you to hold. If the man fails to eat the honey in 1½ minutes from the time he commences, money is yours; if he does eat it in that time I have my $1.00 back, and the "Old Reliable" one year free of charge. The one that gets beat pays for the honey.

I traded this man one two-quart Mason fruit-can full of extracted honey when he was a boy; he took it home, sat down and ate one good-sized loaf of bread, and the honey was just 1½ inches deep in the bottom of the can when he finisht his supper, or one meal. I timed him while he ate 15 ounces of comb honey this summer; it took him just 33 seconds, and he is not dead yet.

Hillsdale Co., Mich. C. H. Austin.

A Little Bee-Keeping Experience.

I have hunted wild bees for years. Two years ago I started saving a few colonies, and last fall I put 6 colonies into the cellar. They are hybrids and blacks, except the last swarm I found in a tree, which I transferred into the movable-frame hive, they are as yellow as gold, except their heads and the tips of their abdomens, which are black. What are they? Are they a good kind to keep?

I understand the handling of bees, but am not acquainted with the different kinds. These are a beautiful bee with golden bodies, tipt at both ends with black.

I use the improved Langstroth-Simplicity hive, but I don't like them, for when I take off the supers it leaves a crack all around for bees to crawl out and bother. Please tell me the best way to drive bees out of the honey-boxes or supers when they are filled.

Last season was a very poor year for honey. I cannot remember a year that the

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They are so simple and perfect that one cannot fail with them. They hatch every fertile egg. Sold under a positive guarantee. **FREE** illustrated catalogue
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flowers were as thick as they were last year, but they did not have any honey in them. I found a number of bee-trees, and but very little honey, and part of that was not fit to eat, being very thin and watery. It tasted and smelt as if it came out of an apothecary shop. C. A. WARNER.
Kandiyohi Co., Minn.

Poor Honey Crop.

The honey crop last season in this county was a poor one, owing to the wet weather in spring and drouth in summer. There was a fair flow of honey in the fall. My bees average only about 25 pounds to the colony. Some of my neighbors did not get nearly so much.

I consider the Bee Journal a great help to me, for I am a beginner, and my neighbors have had bees for years, but they do not read any bee-paper. That's where they miss it, else they would have better success.

The bees are wintering well, and have had several flights already. R. C. SUPPE.
Woodson Co., Kans., Jan. 3.

Bee-Keeping in Oklahoma.

I have five colonies, and put them into the cellar in November. I carried them out three or four days ago, the weather being fine. They are all right so far.

I wish to ask in regard to bees in Oklahoma. I am about to sell out here and go to Oklahoma City. How do bees do in that country? If they do all right, I want to move mine there. G. W. MAUK.
Jackson Co., Kan., Jan. 16.

[Will some of our readers who live in the Oklahoma country, kindly reply to the foregoing briefly.—EDITOR.]

Last Two Falls Good.

The past two falls were the best since I have kept bees, and that is since 1856; 30 pounds was the most I had ever had per colony during golden-rod bloom until the fall of 1897, when one colony gained over 60 pounds in 13 days, and the past fall they gained over 30 pounds.

GEO. S. WHEELER.
Hillsboro Co., N. H., Jan. 12.

Bees Did Poorly Last Year.

I have taken the old American Bee Journal off and on whenever I kept bees for the last 15 years. I would not think of trying to keep bees without it.

My bees did very poorly last summer, but I put in 50 colonies in good condition, and they are all right up to date.

JOHN J. COX.
Chippewa Co., Wis., Jan. 10.

Bee-Keeping in Quebec, Canada.

I try to have about 20 colonies each spring. I live within eight miles of where Dr. Gallup, of California, lived when he bought the lucky swarm from the widow and gave for it the large quantity of lumber, that he told of in his articles on the recollections of an old bee-keeper, about a year ago.

I have a colony that I bought the first of last May, from a man living near the old mill that the Doctor and his father ran at that time. I believe they must be descendants of his lucky colony. They are in a big box, and last season they swarmed four times, beginning about the middle of apple-bloom. That old box colony and its four swarms gave me more surplus than any two of my Italians or hybrids and their swarms.

The first part of August I took all, or about all, the honey there was in all my hives except the old box—I could not get at that. I put my bees into the cellar the first of December, weighing each colony without the bottom-board. The old box weighed 68 pounds, and of the four swarms from this old box one weighed 44, two 45, and

Pointers for Poultry People
That is the real purport of our 228-page Poultry Catalogue and Encyclopædia. Tells all about artificial incubating and brooding of chicks and how to feed, breed and market poultry and eggs. Tells about our 132 yards of pure-bred poultry, with cuts of leading varieties and breeds, and full line of poultry supplies and appliances. Above all it treats on the
"Old Reliable" Incubators and Brooders
the machines that have never been beaten in competition and which never fail. We send the book for 10c. stamps or silver.
RELIABLE EXHIBITION COOPS are the lightest, strongest and easiest to keep clean. They make fowls look handsome on the benches. Use them this winter. RELIABLE COPPER PLIANT LEG BANDS easiest and quickest applied—don't come off in shipping or handling. Prices greatly reduced for this season—12 bands, 20c; 50, 50c; 100, 80c; 500, $3.50; 1,000, $6.50, post or exp paid.
RELIABLE INCUBATOR AND BROODER CO., BOX B 2, QUINCY, ILL.
F.B.W.Co.

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Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

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If you buy an article of the proper quality you immediately cut off the expense of repair. To save repair saves money. To save money earns money. You stop all expense of repair when you buy a set of
ELECTRIC STEEL WHEELS.
They neither break down, warp, rot, get loose or shed the tire and last indefinitely. Made to fit any skein, any height, any width of tire. Send for free illust'd catalogue of these and our ELECTRIC HANDY WAGON.
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A beautifully illustrated paper called "The Corn Belt" is published every month and contains a quantity of interesting information about the farm lands west of the Mississippi River. Pictures of all sorts of farm scenes in Iowa, Missouri and Nebraska. Personal experiences of farmers who went to those states from the East years ago. The handsomest farm paper published. Send 25 cents for a year's subscription to **THE CORN BELT, 209 Adams St., Chicago.**

Think of the Future. Don't Rent. Establish A Home of Your Own.

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Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Please mention the Bee Journal when writing Advertisers.

one 46 pounds. The Italians and hybrids ran from 40 down to 27 pounds.

It is very difficult to find one of the native queens. The bees rush over the sides and out at the entrance as soon as I open the hive and give them a little smoke, and I think the queen goes with them. It is good of them to do this at extracting-time, but they seem to do best at comb honey. It may be that they steal the most of what they get, as they are bad robbers. They can do a big day's thieving when it is so wet and cool that the yellow bees will be lying around on the sidewalks, chilled. I am beginning to think there is no bee that equals the old natives for this climate.

T. R. WOODARD.

Richmand Co., Quebec.

Last Season Disappointing.

Many of us in this part of the world (northwestern Pennsylvania) were disappointed in not getting a large yield of honey the past season, notwithstanding the prospects were very bright last spring up to white clover bloom. Many of our beekeepers got no yield of clover honey, and a few got fair yields. My apiary averaged about 30 pounds per colony, one-half white honey, which sold at 12 cents, wholesale.

We are afraid our bees will get the grip, as well as the rest of us, for the unsteady weather cannot be good for them—at zero or below one day, and 40 or 50 above the next day is certainly not encouraging weather. Bees seem to be all right so far.

GEO. SPITLER.

Crawford Co., Pa., Jan. 19.

Northern Honey Not Granulated.

Dr. Miller says all extracted honey that does not granulate may be lookt upon with suspicion, yet I have some extrated honey that has been all winter where the temperature has not been above 40 degrees, and has been down as low as freezing for a week at a time, and the honey is all right now. Perhaps New Hampshire honey is an exception.

JAMES QUINN.

Strafford Co., N. H.

An Experience—Things Learned.

My past season's experience convinced me more strongly than ever that I don't know much about bees. When I reacht New Hampshire, the middle of April, I found my five colonies packt in chaff cases had wintered so strong, and were working so fine, I felt like crowing long and loud, but like the goose of a rooster I was I never opened a hive until near the opening of apple-bloom, when to my surprise they were building queen-cells and about ready to swarm. I could not stay with them and hive swarms, could not consult Dr. Miller, as I had only five minutes to find out what to do. Well, I had to use something I call judgment, tho I did not have any—if I had, I should have lookt after the bees in time. It was a poor season. I learned a few things.

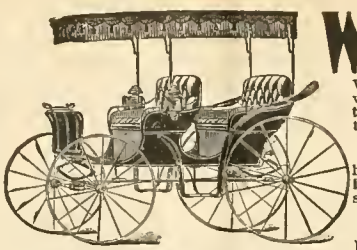
One colony of Italians made progress all through the season, and when they had three stories full and sealed, I could exchange for empty combs from other hives and thus give the Italians room.

I secured one swarm, increast by the nucleus plan to 15, and packt them all up in chaff cases of my own make. Most of them were in two stories of 8-frame hives.

I reacht Florida Nov. 1, and found 19 colonies alive out of 25 here. The fall flow was nearly over. I hurried through them, extracting four frames from each hive, and they nearly filled them again. I secured four colonies from trees in the woods.

I have learned that a wired frame with a starter put in the brood-nest, the new comb will be brought down over the wire all right.

I have learned that when a nucleus is left in one side of a hive behind a division-board, the balance filled out with frames and starters, the bees will cross the divi-



No. 717 Canopy-Top Surrey, with double fenders. Price, complete, with curtains all around, storm apron, sunshade, lamps and pole or shafts, $68; as good as sells for $100.

WHY NOT SAVE IT?

When it comes to buying a vehicle of any kind you may just as well save all the money in the transaction above the manufacturer's price. No need to pay added commissions and expenses of traveling salesmen, middlemen, dealers, agents, etc.

WE HAVE NO AGENTS

but sell direct from our factory at wholesale prices. We are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively.

IN VEHICLES WE MAKE

Rockaways, Surreys, Traps, Phaetons, Stanhopes, Driving Wagons, Top Buggies, Open and Top Road Wagons, Spring Wagons, Delivery Wagons, Milk Wagons and Wagonettes. In harness we make either single double harness suitable to all the above vehicles and heavy team use.

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PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½-in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

OUR GUIDE TO POULTRY CULTURE

tells first of all about the wonderful CYPHERS INCUBATORS AND BROODERS with a complete history of the laws of incubation. Then about the money there is in poultry and how to get it. All about modern poultry houses with plans for construction and cost. Tells how the big breeders succeed and gives pictures of their plants. It's worth many times its cost. Sent for 10c. Circulars free. The CYPHERS INCUBATOR CO. Box 50, Wayland, N.Y.

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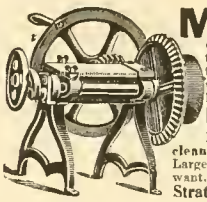

MAKE 'EM LAY

double the eggs in the middle of the winter, when eggs are worth the most money. Hens do that when fed on green cut bone. It's best prepared by

DANDY GREEN BONE CUTTERS.

Made with or without gear. Cut clean, fine and easy. Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

Stratton & Osborne, Box 21 Erie, Pa

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Improved Farm For Sale

Near the best market and best shipping point in West Michigan. NOW TACKLE THE SUGAR BEET.

A. & O. BAXTER, Muskegon, Mich.

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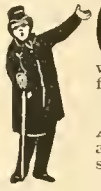
PAGE

Smokeless Powder

is used to escape notice. For years we've loaded with black powder. You've noticed the smoke, —why not promptly return our fire with a letter.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.



We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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FOREWARNED IS FOREARMED

Do Not Wait until the last moment to order your Supplies. **You may be disappointed** by delay in shipment and lose a portion of the honey harvest. **Save money and gain honey** by sending us your estimate NOW. We are offering **Special Inducements for Early Orders.** Our 1899 Catalog free.

SPECIAL AGENTS:

E. T. ABBOTT, St. Joseph, Mo.
L. C. WOODMAN, Grand Rapids, Mich.

G. B. LEWIS CO., Watertown, Wisconsin.

sion-board and work on all right, with the bee-master 2,000 miles away.

I have learned that a 5-inch rim between the brood-chamber and cover is a nice place to get chunk honey made without labor or attention, and a handy place to secure it compared with a hollow tree or even a frame hive with crost combs.

I have learned that you will get no poor queens reared above a bee-zinc with a good laying queen below. If the honey-flow is not sufficient none will be reared.

Now will some other greeny write about his blunders and mistakes? Perhaps while I was planning to run on the no-swarming plan, and opening my hives for the first time with queen-cells all built, some other fellow was standing with swarm-catcher, spray-pump, and new hives—and never got a swarm. EDGAR B. WHIPPLE.

Orange Co., Fla., Jan. 30.

Light Crop—Honey Not Granulating

The honey crop was light here the past season. I got 1,200 pounds of extracted and 400 pounds of comb honey from 50 colonies, spring count—all fall honey. Prospects are better for white clover next season than they have ever been in my recollection. Can it be possible that "Egypt" will yet be a white clover country?

Let me say here that Dr. Miller's answer to New York, page 7, does not hold good with me. The Doctor's answer would lead to the conclusion that all pure honey will granulate on the approach of cold weather; I have never known Spanish-needle honey to granulate *unless* there was a large percent of heart's-ease mixt with it. I *never* have my extracting-combs cleaned out when the extracting has been done late in the fall, yet the honey left in them does not granulate. I keep my unfinisht sections, honey and all, for the next seoson's use, and have never had one to granulate, tho I would surely expect it if it were not Spanish-needle honey in them.

I would be pleased to hear from others on this subject, from Spanish-needle districts, through the "Old Reliable."

R. P. MAHON.

Effingham Co., Ill., Jan. 6.

Honey Crop a Failure.

The honey crop was a failure here last season, but bees stored plenty for winter stores from golden-rod. S. W. SMILEY.

Lincoln Co., Mo., Jan. 30.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Glass Honey-Jars

For 3-4 Pound at $3.50 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.50 per gross; 5 gross, $3.25 per gross. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best and only Weekly Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.
Please mention Bee Journal when writing.

LADIES, If you have superfluous
HAIR ON THE FACE

send for new information how to remove it easily and effectually without chemicals or instruments. Correspondence confidential in plain sealed envelope.
Mrs. M. N. PERRY, C-1, Box 93, Oak Park, Ills.
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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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INDIANAPOLIS, INDIANA.
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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

Sent Free Our large Illustrated catalog of Bees, Hives, Smokers, &c Address,

Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.

The "Emerson" Binder.

The Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 16.—This month trade has been of small volume in comb honey, due perhaps to the extreme cold that has made transportation dangerous, we now look for a better movement; yet the season is drawing to a close, as after the middle of March there is practically none sold until the new harvest is ready.

Fancy grade of white comb, 13c; travel stained and light amber, 11@12c; amber and dark, 8@10c; candied and mixt colors, 6@7c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 27@28c. R. A. BURNETT & CO.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good, Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.
WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.
HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, Feb. 8.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, Feb. 8.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.
BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.
C. C. CLEMONS & CO.

BUFFALO, Jan. 27.—There is a little more activity on strictly fancy 1-lb. combs at 12c. The bulk of receipts of low grades sell at 10c. down to 7c., and in a few cases even less. A moderate amount can be sold every day. Extracted, 4@6c., according to quality.
BATTERSON & CO.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & CO.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.
A. V. BISHOP & CO.

Convention Notice.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.

Mill Creek, Utah. J. B. FAGG, Sec.

Please mention Bee Journal when writing Advertisers.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER 20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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Carloads of Bee-Hives

Sections, Shipping Cases, Comb Foundation, and EVERYTHING used in the bee-industry.

We want the name and address of every bee-keeper in **America.** We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc:

Inter-State Manufacturing Co.
Hudson, St. Croix Co., Wis.

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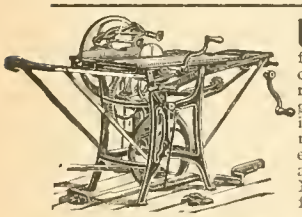
IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

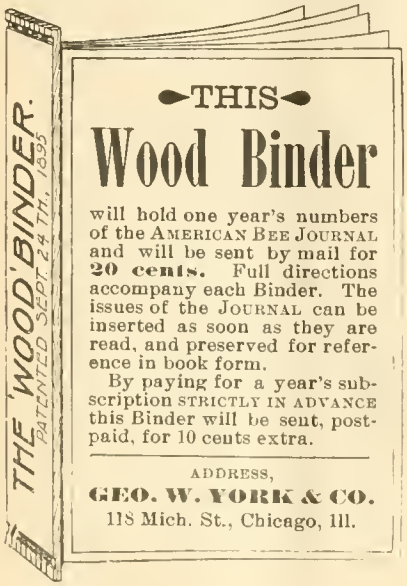
Bee-Keepers' Guide.

Liberal Discounts to the Trade.



UNION Combination SAW for ripping, cross-cutting, mitering, rabeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT and HAND POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 16 Water St., Seneca Falls, N. Y.



THIS

Wood Binder

will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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GEO. W. YORK & CO.
118 Mich. St., Chicago, Ill.

22nd Year **Dadant's Foundation.** 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.

Because **IN 22 YEARS** there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? **Beauty, Purity, Firmness, No Sagging, No Loss.**

PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

Bee-Keepers' Supplies of all Kinds

Langstroth on the Honey-Bee—Revised.

The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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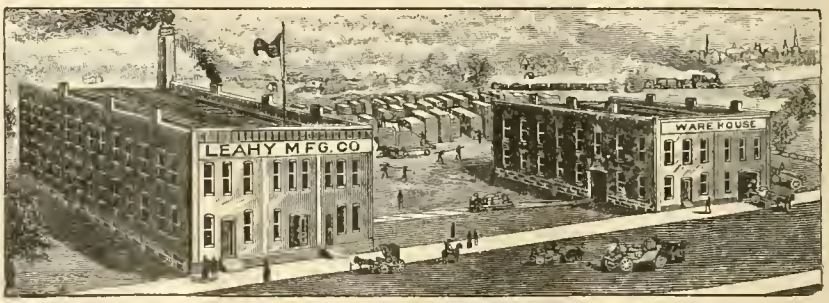

For Apiarian Supplies, Address,

LEAHY MFG. CO., Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Eastern Bee-Keepers!

Do you expect to buy anything in the line of Apiarian Supplies the coming year? If so, we would be pleased to hear from you as to what you want, and mail you our Catalog. As we keep

Several Carloads of Supplies

in stock, we can ship promptly, and our location insures you low freight rates and quick transportation.

OUR HIVES, SECTIONS, ETC.

are made in Wisconsin where lumber is cheap and the best can be obtained. We keep **Dadant's Weed Process Foundation** in stock.

SPECIAL PRICES ON LARGE ORDERS.

Our apiaries are located at our home, Glen Cove, L. I., from which we sell Bees and Queens during the season. We have several yards of pure-bred, white Wyandotes, which we have bred for eggs, not fancy points. They are great winter layers. If you are interested in **POULTRY,** we would like to quote you price on eggs for hatching. We guarantee fertile eggs.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

BEE-SUPPLIES.

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

We also manufacture **Tanks** of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, *E. KRETCHMER, Red Oak, Iowa.*

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MARCH 2, 1899. No. 9.

CONVENTION PROCEEDINGS

Report of the California Bee-Keepers' Convention

BY JOHN H. MARTIN.

The ninth annual meeting of the California State Bee-Keepers' Association was held in the Chamber of Commerce, in Los Angeles, Jan. 11 and 12, 1899.

The meeting was called to order by Secretary McIntyre at 2 p.m., Jan. 11. In the absence of Pres. Hatch, Mr. C. H. Clayton was elected President *protem.*

The first paper presented was by Mr. Geo. W. Brodbeck, on "The Bee-Keeper of the Future." The needs of better methods of management were pointed out, the results would be larger yields and a better quality of honey, all of which desirable results will surely come—in the future.

The Secretary read the following paper from Mr. W. A. Pryal, after which followed a lengthy discussion:

Our Gigantic Honey-Producer—The Eucalyptus.

I do not want it understood from the title of this paper that the eucalyptus, or Australian gum-tree, is a gigantic producer of honey, but I wish simply to let you know that I consider it a great, big nectar-yielding tree of incomparable value to the honey-bee and her owner.

I have not seen a larger tree in America that secretes

Blue-Gum on Right (in bloom)—Red-Gum on Left (the tallest of all)—California Laurel or Bay-Tree (in lefthand corner) —Blue-Gums on the Hitt at the Left.

nectar; I don't believe any one else has. Where is there a tree, often 100 feet high, in this country, that can be called a honey-tree? As far as I know, the basswood does not grow as high as our tall gum-trees, yet it secretes much more honey, at least in some years, as you know who have followed bee-keeping in the Eastern States. Possibly some day, when the gum-trees now growing in this State have obtained a good old age, they may be far superior honey-yielders than the basswood ever was.

We have bigger trees in this State than the eucalyptus, and I am proud to say that they are natives of California. Perhaps some day, when our eucalypti are old and hoary, they may be larger specimens of the vegetable kingdom than any of our sequoias of world-wide fame.

We Californians want to see everything about us spring into being with wonderful rapidity. We desire to prove to the world that we live in a fast age, and I think we do it. We have trees that in a few short years grow to prodigious size. "Jack's bean-stalk" would not be "in it" with some of these trees of ours. While I say our trees, still I would include some of foreign origin—the eucalyptus,

Blue-Gum (Eucalyptus) Flowers.

for instance. In the tree just named, bee-keepers are the most interested; it is one that overshadows everything else in their bee-garden, and as it is the one I started to discuss in this paper I must confine myself to it.

It is well that our delightful climate allows us to grow this tree, for it enhances the value of our State as a bee's paradise. With the aid of the honey from the eucalyptus an apiary that is located near a grove of these trees is able to bridge over a gap when other bee-pasturage would be an unknown quantity.

About the Bay of San Francisco, and more especially in the vicinity of Oakland and Berkeley—where my observations of the tree under consideration have been principally confined—the blue-gum blooms in winter and early spring. The flowers are numerous, and I have known individual trees to begin their period of inflorescence in December and continue to bloom continuously until May or June. The buds on the south side of the tree are brought into bloom by the warm sun of December or January, and as the days grow more balmy the flower-cups expand in increast ratio until finally the whole tree has opened its honey-chalices to the bees. It is a delightful pleasure to a lover of Nature to sit beneath a eucalyptus tree on a balmy day in winter, and listen to the myriads of bees merrily humming their gladsome tune as they industriously gather the nectar from the thousands of flowers overhead. With what vim they work is fully attested by their joyous hum and their rapid flight to and fro between hive and tree.

It is not long after the gum-tree begins blooming that the brood-chamber that was most depleted of stores during December—which, to me, seems to be the month when the bees consume the most honey in this climate—is again well provisioned. This honey is very dark in color, thick, and of a strong, aromatic flavor; the color often resembling the iron-colored sap that sometimes exudes from a cut in the tree and forms a gum of a rusty iron nature. And, in passing, I might ask, What honey gathered during the winter months in this State is light in appearance, and of a good marketable flavor? I know of none. Do you? My observations lead me to the belief that none of our honeys from native or imported plants yield light-colored honey, except in the warmer months of the year.

It is not a light-colored honey that the apiarist cares so much for during a year of drouth—almost "any old thing" at such a time will satisfy him and his bees. Where the apiary is located near a gum forest, or in a neighborhood where gum-trees are numerous, even if they are planted as roadside trees, as we find them in nearly all portions of the State, the apiarist's bees will not starve. They will be able to fill their hives with stores obtained from the flowers of these trees.

All through the winter, when the weather is fair, my bees work on the blossoms of eucalyptus globulus (blue-gum), and sometimes on eucalyptus rostrata (red-gum). It is not always that the latter blooms during winter hereabouts—more often its season of inflorescence is in the fall. Even then it is a boon to the apiarist, for it allows the bees to lay in a store of sealed honey for winter.

We could sow the seed or set out many plants that are noted honey-yielders, but how many do so? And this mainly for the reason that we consider the ground more valuable for some other crop. Where there is an abundance of water for irrigation, alfalfa is often raised, and an excellent honey-producing plant it is, too. Would that there were more of it in this State, for it would not only be a great acquisition for the apiarist, but for the cattle and sheep raiser as well.

Right here I would like to suggest to bee-keepers who have not tried it, that they fill their pockets with alfalfa seed when about to take a walk along the bank of a creek, or along the roadside, and then scatter some of this seed at intervals during their journey. By taking these little walks in different directions they will soon have seeded quite a section about their home. Most of this seed will grow, provided it is sown just before a rain. In a few years seed from the plants thus grown will scatter and become self-sown. The area of one's bee-pasture will be greatly augmented by pursuing this plan for several years.

There are many varieties of the eucalyptus in California besides the two I have already referred to, but I consider these the best for the bee-keeper, as they are of rapid growth, bloom profusely, and make excellent fuel. Eucalyptus globulus is well known; it is now about one of the most common and striking trees we have in the State. Eucalyptus rostrata is not so common. It is not quite so rapid a grower as the blue-gum, but it is generally of a handsomer appearance, if it is possible to attribute beauty to either of these trees. Some people are of the opinion that all varieties of eucalypti are ugly; this is far from being correct, for out of the several hundred varieties of gum-trees there are many that are ornamental.

Any bee-keeper who possesses a patch of land in the hills should by all means plant as many gum-trees as he possibly can, as I consider these trees very valuable for fuel, ornamentation (and God knows that our Southern California hills—and some of the Northern ones, too—are quite desolate in their treeless nudity), enhancing the value of the realty; and last, tho not least, for honey.

Eucalyptus is of easy culture, and any one can raise the plants from seed. When the young plants are eight or twelve inches high, they are ready to set out in the place where they are to remain. They will require no attention after they have been in the open ground a year or two. I would recommend planting them in clumps of a dozen or so, rather than plant them at set distances through the field as one would plant an orchard. Clumps of trees at irregular intervals scattered over a field or hillside are more picturesque then when set out orchard fashion; besides, the

trees grow better; they do not have that bean-pole appearance that Rambler attributed to them once upon a time. In order to make them grow rapidly the first year or two after being planted in the open, and to prevent their being choked out by weeds, they should be cultivated.

I have been able to work my bees much closer since the advent of eucalyptus honey in my neighborhood than I was at any time previously. Before we had a flow of this honey there would be few wild flowers for the bees to work upon after the last of July. Now we have considerable honey from the red-gum during the fall. As there are five good-sized gum-tree forests in my vicinity—two being on the grounds of State institutions at Berkeley, and another of over 100 acres a few hundred yards away—perhaps I am too enthusiastic about these trees. Yet I hardly think I am, for I have given them a good deal of attention as honey-producing trees since 1877, as will appear from the old Bee-Keepers' Magazine and the Pacific Rural Press.

After March eucalyptus honey is not so dark and objectionable as that gathered during the preceding months—

Blue-Gums in Winter—Red-Gums on the Hill at the Left.

at least that is my experience. Possibly in the southern counties of the State the honey from this source may be lighter in color, owing to the difference of climate. I am told that some of the honey gathered from these trees in Australia is very beautiful in appearance; that it is as light-colored as one could desire. Then I have been told by others that it is dark and disagreeable in flavor. I have not the least doubt that my informants are right; they came from different sections, and the climatic conditions being different, the honey was consequently affected thereby.

I have not seen any gum-tree honey that I could call light amber. Our light honey is produced after the eucalyptus has almost ceast to bloom.

I have noticed that in some portions of the State more of one variety of this tree is set out than there are of others, and that hardly any two places plant largely of a sort that predominates in another locality, excepting, I might say always, the everlasting blue-gum. What a hold this tree has on the affections of the people of this State! I suppose the reason of this uneven distribution is due largely to the nurserymen who introduced the trees in the different towns of the State. One man would get a collection of a few sorts from some Australian friend. He would raise a lot of plants from these, and in time they would be set out in his immediate vicinity. In and around San Rafael there are some fine specimens of eucalypti, one of which is, I believe, eucalyptus ficifolia, which produces a generous profusion of gorgeous scarlet flowers in trusses. It is one of the most handsome of the family; is rather tender, and on this account is cultivated more largely at the place named than any other place in this portion of California, because the climate of San Rafael is noted for its mildness. I have often seen ladies with large masses of these flowers as they wended their way from the San Rafael ferry in San Francisco. I should judge that the tree is a rich honey-producer.

At San Mateo, San Jose, and other places about the Bay, I have seen many varieties, and they all seem to be attractive to the bees. I should think there are more than two dozen varieties grown about Oakland. It was here, I believe, that the gum-tree was first planted in California; it surely seems to thrive better hereabouts than in any other place I know of. On our place we have a blue-gum tree about a quarter of a century old, that is over three feet in diameter a foot from the ground, and something over 100 feet tall.

In the southern portion of the State I noticed a few varieties of eucalypti that I had not seen up here. I shouldn't wonder but they may be better honey-producers than anything we have hereabouts.

Over a score of years ago a bee-keeper in Los Angeles county asserted that the honey of a certain variety (he called it eucalyptus ekostrata) of gum-tree near the City of Angels yielded a nectar that poisoned all bees that sipt thereof. The Herald of that city exploited the matter. It appeared that it was slaughtering bees by the million; that it bid fair to destroy every bee near the city. My attention was called to the article by the editor of the Pacific Rural Press, and I was askt if I ever heard of eucalyptus honey killing bees. I answered that I had not, and I doubted very much if nectar from any plant was injurious to bees. After several more squibs in the local papers of Los Angeles, the matter was dropt, and I have heard nothing since about gum-tree honey being injurious to bee-life.

In closing, let me advise bee-keepers, especially those

who have plenty of unimproved land, to plant eucalyptus trees wherever and whenever they can. Those who have little room may plant out what trees their land will accommodate. Raise more plants than you require for your own use, and give the surplus ones to your neighbor to plant. He may be glad to get them, for he may have been wishing to establish a windbreak behind his barn, or, perhaps, he had been thinking that he should set out a lot of trees that would give all the fuel and fence-posts he and his children would require in the future. Just cast your bread upon the waters and it will return a hundred fold.

W. A. PRYAL

Mr. Brodbeck practices migratory bee-keeping, moves his bees from the sage-fields in the mountains to the suburbs of the city where the bees have access to a large acreage of the eucalyptus trees; the bees get enough honey to keep them through the winter, and sometimes they store a surplus.

Mr. Steele recommended eucalyptus robusta as a good honey-producing tree. It required great care to start the growth of the tree from the seed. The seed should be sown in fine soil in trays, and covered lightly with fine soil, and exposed to warmth and moisture. The young tree, when first planted, requires some nursing with water for a few years, but when it becomes fully rooted it will take a very severe drouth to kill it.

METHODS OF FEEDING BEES.

Methods of feeding were discust by M. H. Mendleson and others. Mr. Mendleson crowds the bees upon a few combs, compelling them to crowd the queen into small space; by so doing the queen is prevented from enlarging the brood-nest and rearing a large number of bees to consume the temporary stores given them. He used for a feeder a half of a five-gallon can in which a float is placed.

Mr. McIntyre used a six-pound feeder on the rear of his hives, the bees having access to it through an auger-hole. The feeder has a cover to it, and there is no chance for robbers to molest the colony—they would make no attempts to gain an entrance in front of the hive.

Mr. Aldrich feeds at every tenth hive; to this colony he gives all of the feed and distributes combs as fast as they are filled to the colonies that most need the food.

Mr. Wilkin found that bees could be fed nicely at night, by tilting up the front of the hive and turning the feed in at the entrance, the bees taking it up from the bottom-board.

The session of the Association on the morning of the 12th showed some signs of dwindling. Altho the attendance was not so numerous, the discussion of foul brood laws and foul brood was quite animated, and consumed a good portion of the forenoon.

The question was askt if the bee-keepers would make an exhibit at the Paris Exhibition. As no concerted action was taken it will probably remain an open question, and made, if at all, upon individual contributions. California has never made a creditable exhibition of honey as representing the whole State, and probably never will until the advent of that "sweet bye-and-bye" referred to in the opening paper by Mr. Brodbeck.

MARKETING HONEY AND CO-OPERATION.

Mr. McNay, of Wisconsin, was present, and gave an interesting talk on marketing honey. He stated that nearly all of the Eastern honey is put in up barrels and kegs, and dealers prefer Eastern honey in that style of package. He advised bee-keepers not to ship honey to commission-men unless they got a good advance upon their honey. Honey that is sent on without exacting an advance, is usually put in the back portion of the warehouse, and is the last to be sold; that is the reason why bee-keepers sometimes have to wait so long for their returns. He found that where extracted honey was put upon the market, and where people could have confidence that it was the pure article, it would sell better than comb honey, and the sales could be increast. As there is a difference in tastes, and as some people like a strong-flavored honey, he could sell buckwheat at the same price as the light-colored and milder-flavored.

Mr. R. Wilkin, our well-known veteran bee-keeper, gave an interesting address upon "Co-operation." He had noted a great improvement in honey-production since 1861. Since that period more conventions were held, and journals publisht, and they all had an influence to elevate the business of bee-culture. The person who did not read the bee-papers, or did not attend the meetings of an association, obtained a second-hand knowledge of the business. Bee-keepers are proverbial for their generosity in imparting their knowledge. His idea was that we should come together often, and trust each other more, and the result would be in a better class of bee-keepers. He indorst the labors of the United States Bee-Keepers' Association, and hoped all would join the organization.

Mr. Wilkin was elected President for the coming year, J. F. McIntyre re-elected Secretary, and the present Treasurer continued.

A short honey season is not conducive to a large attendance at a bee-convention in California. Fully 50 percent of the bees have died, and the rains have not been sufficient encouragement to ensure a honey crop.

Los Angeles Co., Jan. 21.

Winter Flights for Bees—Constipation.

BY C. P. DADANT.

WE are having a good winter for the bees, tho it is a poor season here for the wheat-grower. There has been but little snow, but the alternatives of cold and warmth have given our bees repeated chances for winter flights thus far. It would now be very strange if the bees did not winter well. The early and rigorous cold weather of November and December threatened us with a long winter, but January proved to be mild, and the severe but short cold spell of February has not done them much harm.

Bees are a warm-blooded insect, and as long as a colony keeps in health the temperature of the cluster is about the same as the normal temperature of the blood of a human being. So the bees go safely through some of the most extreme cold-spells, even with a great deal more ventilation than one would think was good for them.

We had a neighbor bee-keeper, years ago, who kept bees in the old-fashioned way, and allowed them to go through the winter without a bottom-board, the hives being raised from the ground on stakes, and his winter losses were not much greater than the average. He held that they wintered better in that way, as they never lackt ventilation and pure air, which was true, but it always seemed to me that it was like sleeping with a window open. I know of people who never sleep without an open current of cold air. I never could become quite convinced that this was the proper way to avoid colds and catarrh, altho I will acknowledge that a change of air is necessary, or rather, indispensable, but I want mine warmed up before it reaches me, during zero weather at least. Tho our bees are in no fear of catarrh and cold, the protracted cold and extremes of temperature compel them to consume an unusual quantity of stores, and their abdomens become distended with fecal matter which they must discharge occasionally, if they are expected to keep healthy and winter well.

So an occasional warm day, allowing them to take wing and cleanse themselves, is always beneficial, and it may be safely asserted that with a warm day once every three weeks, ordinary colonies will live through the most frigid weather that is known in our latitude. When the cold weather is of long duration they are not only in danger of being compelled to discharge their bowels in the hive, but are also running the risk of constipation. And, by the way, this constipation which, in some years, seems to take the shape of a contagious disease, is but little seen outside of long confinement. I have often thought that the disease generally called "the nameless bee-disease," might be but a contagious form of constipation.

Cheshire, who has made an anatomical examination of this disease, gives it the scientific name of "bacillus gaytoni," after Miss Gayton, who, it seems, called his attention to it. In constipation, as in the "nameless," the bee is apparently crippled by the distended condition of her abdomen; when the contents of the bowels are examined, they are found loaded with offensive matter as foul as that discharged by healthy bees that have been confined a long time in the hive. The disease seems to be most prevalent among the oldest bees, for in most cases the sick ones are

those which are deprived of hair by long toil, and are "slick and shiny."

It has been suggested that the slick and shiny appearance was caused by the disease itself and only a result, but I have often seen young bees, with all other appearances of health and a full coat of hair, suffering from this same malady. When constipation has been prevalent in a colony, it seems to retain its hold among the bees, and to continue slowly and contagiously, and I have often known even the queens to die of the same cause. Occasionally the "nameless disease" has run with more or less force in a hive for an entire season, tho not with sufficient virulence to endanger the strength of the colony, but I am of the opinion that it may usually be traced back to the long winter confinement of the bees on perhaps inferior honey.

Plenty of good, well-diluted, warm feed in the spring, is the best thing that can be recommended to do away with this disease, but it is certainly advisable to procure our bees as many chances of flight as possible during the cold weather.

We have just had a pleasant day (Feb. 15), and the bees have again had a good cleansing flight. Every colony is alive in the home-apiary to-day. Surely the loss cannot be great. Hancock Co., Ill.

No. 1.—Doolittle's Talk on Bees at a Farmer's Institute in New York State.

BY REPORTER.

JANUARY 18 and 19 there was a Farmer's Institute held at South Onondaga, N. Y., about 10 miles out from Syracuse. Among the other speakers announced on the program was Gilbert M. Doolittle, who was to be the last speaker for the afternoon of the first day. Besides the address of welcome in the morning, there were to be two speakers in the forenoon, and in the afternoon ex-Gov. Hoard, of Wisconsin, was to address the institute preceding Mr. Doolittle.

But the meeting opened late, and for this reason the first speaker of the forenoon took up all the time before dinner, thus crowding three speakers into the afternoon session. The first took an hour and a quarter of time, and the Governor an hour, so that it was nearly four o'clock when Mr. D. took the platform and lookt over the tired audience which had been assembled for about two hours and a half.

Mr. Doolittle's face showed that he was in a "brown study" for a moment, as if he feared he could not "catch and hold" his hearers with the subject, "Bees and Honey," which had been assigned him, when in their tired condition, for quite a few had been going out before the Governor closed his address. But presently a light came over his face, and he began something like this:

A little boy was sent to a neighbor's by his mother, one dark night, on an errand, and this little boy was always afraid in the dark. When he returned, his mother said to him, "You were not afraid much, were you, my son?"

The boy replied, "Oh, mamma, if you had only felt the streaks of scaredness run up and down my legs as I did, you would know I was scart."

"And now to follow two such eloquent speakers as have preceded me this afternoon, and especially a Governor of a great State like Wisconsin, makes the 'streaks of scaredness' run up and down my legs, just as they did on the legs of that little boy."

Here Mr. Doolittle gave a great shudder, which caused a smile to come over nearly every face, and from that time on Mr. D. had perfect power over those before him, so that no one left the room till he had finisht speaking.

He went on to tell how he was raised in "old, cold Spafford" (as the town of Spafford in which Mr. D. lives has the highest elevation in the county of Onondaga), where it was so cold they could eat "jack-wax" off snow-banks on the Fourth of July, and raise flax to perfection. How his parents moved to that town from the State of Connecticut, and being poorly supplied with this world's goods, kept him at work on the farm, so he had only a limited district school education. How one day, when the school commissioner came to examine the school, his teacher had pointed him out as "the biggest ignoramus in the school," and, said Mr. Doolittle, "he might have added his name is *Doo*-little."

This caused a ripple of mirth to pass over the audience, when he continued:

"But I am not here to tell you of my scaredness, of my home surroundings, or anything of the kind, but to speak to you as best I can, in my homely, ungrammatical way, about bees and honey."

He then went on to tell how each good colony of bees in early spring contained a queen, and from five to ten thousand workers. The worker-bees are the ones which do the stinging, gather the nectar from the fields, nurse and feed the larvæ, build the comb, etc.; while the queen is simply the "mother-bee," her only business being that of laying eggs. When she first commenced to lay in the early spring she only laid about ten eggs a day, but as the weather grew warmer she made an increase, until, when doing her best, she would lay from two to three thousand every day during the forepart of June. These eggs were in that form for three days, when they hatcht into little worms or larvæ, so small as hardly to be seen with the naked eye, but, under the stimulus of the chyle fed to them then, grew till they nearly or quite filled the cell six days after hatching, when the cell was sealed over, and they remained in the pupa form, or hid from view, for 12 days more, when they emerged a perfect bee.

He told how the young bees did little more than eat and straighten out for the next day or two, when they went to feeding the larvæ, building comb if needed, and doing general "housework," till they were 16 days old, when they went out as field-workers, gathering honey, water, pollen and propolis, till 45 days from the time of emerging from the cell, when, as a rule, during the working season, they died of old age, and another generation took their place. Thus the workers lived 45 days only in the summer-time, but in the winter, when they were comparatively inactive, their vitality was not worn out so soon, hence the bee that emerged from its cell in September lived over till the next May or June.

As the bee was 3 days in the egg form, 6 days in the larval form, and 12 days in the pupa form, making 21 days from the egg to the perfect bee, the queen could place on the stage of action two and one-seventh generations to where one died off, thus bringing about swarming through her more prolific egg-laying during May and June.

He next told how by reversing and spreading the brood the queen could be coaxt to lay a greater number of eggs than she otherwise would, and if planned rightly, so that the greatest number of workers were on the stage of action at the same time when the honey harvest was at its best, the best results could be secured in honey.

He explained how to know when the honey-producing flowers would bloom, and how to rear the bees so as to meet this bloom; but to go into all of the minutia of what he said would take too long to be interesting to the reader. He reminded the audience that few bee-keepers paid much attention to this, which was the most essential point to be lookt after in producing honey. In fact, he made it very plain that the person who did not look after this part of the business could not possibly secure the best results in apiculture.

At this point he took the audience by surprise with a story something like this:

There was a certain darkey in the South who went almost daily to his nearest city to vend the proceeds from his truck-garden. But one morning something unusual happened, which was that his wife went with him, for the first time. As he reacht the suburbs of the city he called out in his usual way, "'TATOES! 'TATOES!" Mr. D. here put such power in his voice that quite a number jumpt in their seats, and one girl gave a little shriek, which only added to the merriment.

Immediately the darkey felt something pulling on his coat-skirt, and his wife said in a hoarse whisper, "Hush, hush, honey; you'll waken everybody in town." To which the darkey answered, "Do you suppose any one will hear me when I say 'TATOES!"

"Hear you, hear you, yes! they'll hear you all the way for five miles around!"

"Well, that's what I'm shouting for. 'TATOES! 'TATOES!"

This story brought a general applause, and as soon as it had subsided Mr. D. impreſt upon his audience that such shouting, about bringing the bees and honey harvest together, always brought success to the one practicing it.

He told them how he might talk to them about swarming and non-swarming, queen-rearing, crating and marketing honey, preparing for winter, etc., but if they would take home with them one thought of securing the bees in time for the honey harvest, both he and they would be well paid for the time spent in coming to the institute.

[Continued next week.]

Italian Honey vs. That Stored by Blacks.

BY EDWIN BEVINS.

WHEN I first read the article by Mr. Bates on page 19 I said to myself, "The committee appointed to investigate and report on the causes for the superior quality of Italian honey is making progress." Then I "read over again that perplexing epistle," and concluded that not much progress had been made, after all.

It may seem ungracious in me to maintain so persistently the character of a Doubting Thomas, but as long as I *am* a skeptic I will not try to appear to be something else. When the evidence is such as to produce conviction I will own up as freely as Thomas did.

And now let us analyze the evidence adduced by Mr. Bates.

He says, "The taste of the pudding is the proof," leaving us the inference that he has tasted the two puddings made by the two different cooks, and that the pudding made by the Italian cooks had an appreciably better taste than the one made by the black ones. Now, I am not going to contend that one pudding did not taste better than the other. It is not the fact that one tasted better than the other, but the reasons for this better taste that we are in search of.

In his third paragraph, Mr. Bates relates the circumstances that a few years ago he had two colonies of blacks located side by side and apparently equal in all respects. One colony stored surplus, the other consumed the honey it had. His conclusion is that the difference in the "reach" of the bees of two colonies made the difference in results. It is then a fair conclusion that *some* colonies of blacks have longer tongues than do other colonies of blacks. If this be so, may it not well be that some colonies of blacks have tongues as long as some colonies of Italians? That the average length of the tongues of Italians may be greater than that of the blacks may be a proven fact, but I confess that I am not familiar with the proof.

In his seventh paragraph, Mr. Bates tells us that one season he had a 3-frame nucleus of Italians which beat an 8-frame colony of blacks. He attributes the difference in production to the difference in the reaches of the two strains, and also the difference in the quality of the honey. With what did he compare the Italian product? He says that he got not a pound of surplus from the blacks. But then he might have had other colonies of blacks that stored surplus.

I think that if Mr. Bates kept none but Italian bees he would some seasons observe similar differences in production between different colonies; and similarly if he kept none but blacks. So many factors contribute to produce differences in both production and quality that it will not do to attach much importance to any one of them.

There is some plausibility in the theory of Mr. Bates, that the better portions of the flower-secretions go to the bottoms of the flower-cups, and this would make me wish that these better portions would rise like cream instead of settling like a sediment, if it were not for the fact that the flower-cups of many flowers are bottom side up.

The facts recited by Mr. Bates in his third paragraph *seem* to be fatal to many of the claims and contributions embodied in his article.

Like the member of a certain fraternity (which shall be nameless), I am hungering and thirsting for "more light."

I do not now question the fact of the better taste of the product of Italian bees—this fact is attested by so many credible witnesses that I am constrained to yield it my belief. But that this superiority is present at all times and under all circumstances may well be questioned. I would be understood as not being satisfied with the reasons thus far given for the existence of this better taste when present.

It is my impression, however, that when this discussion is over, it will generally be agreed that the reasons presented by C. P. Dadant are the reasons which come nearest affording a solution of the problem.

Decatur Co., Iowa.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Number of Bees in a Pint.

How many bees are there in a pint? As many claim that 40,00 bees make a good colony, I would like to know on what plan to estimate. so that I can tell when I have from 20,000 to 40,000. If I know how many there are in a pint I can estimate a colony. PENNSYLVANIA.

ANSWER.—According to Root's "A B C of Bee-Culture" there are about 1,600 bees in a pint.

Number of Colonies in One Apiary—Two Queens in One Hive—Storing Syrup.

1. How many colonies will do profitably in one apiary?

2. Can there be two queens kept in one colony by having a queen-excluder between, with one entrance?

3. If syrup is fed to bees and they store it in the cells will it be honey or syrup? OREGON.

ANSWERS.—1. That depends on the amount of pasturage. J. F. McIntyre, in California, had 600 colonies in one apiary. It is quite possible that a less number might give more surplus, and it is entirely certain that in the large majority of locations 600 colonies would not only yield no surplus but would starve for want of food. It is estimated that a colony consumes about 60 pounds of honey in a year, and that 60 pounds must be taken from all that is gathered before any surplus is left for you. There is no way to determine positively how much nectar is in a certain territory, but suppose 6,000 pounds of honey is the entire amount that can be gathered by the bees in a given apiary. If there are 100 colonies, they will need for their own use the whole of the 6,000 pounds, and you will have no surplus. If there are more than 100 colonies, they will starve unless they are fed. If there are 50 colonies, they will need for their own use 3,000 pounds, and the remaining 3,000 you would have in surplus. If you have a fair amount of white clover or linden, with fruit-bloom and some fall flowers, it is probable that 100 colonies would do well, but it must be remembered that no two years are exactly alike.

2. You can have two queens in a hive by having a thin board partition between the two, and the two queens will sometimes, perhaps generally, be allowed if an excluder is between.

3. If bees are fed syrup in the ordinary way, whatever they store will still be syrup.

Transferring—Preventing After-Swarms—Fence and Plain Sections.

1. In transferring, would you advise the Heddon plan as described in "A B C of Bee-Culture?" If so, how should the second "drive" be united with the first at the end of 21 days, as I presume they will have reared a queen of their own in the meantime?

2. To prevent after-swarming, I see you advise setting the swarm on the old stand, leaving the parent colony close to it for a week. The "A B C of Bee-Culture" recommends placing the old colony at the other side of the yard at once. What are the reasons for the different plans, and why will either plan stop it?

3. I am thinking of adopting fence and plain sections this year. Would you advise doing so, or sticking to the old style? Which of the plain sections would be better—the square or the tall? WOODLAWN.

ANSWERS.—1. Yes, the best way is to use the principle of the Heddon plan, which is to get all the worker-brood hatcht out before cutting out any combs. Very likely, however, you will be better suited if, instead of driving, you wait till the bees come out of their own accord by way of swarming. For one thing, it's less trouble to hive a swarm than to drive them. Another thing is that the bees know

when is the right time when all things are ready for swarming, and you may make a mistake about the best time for driving. If the bees do not swarm by the time most colonies have swarmed, you still have the chance to drive them. At the end of 21 days you can drive out all bees and unite without paying any attention to queens—the bees will settle that matter for themselves.

2. When a prime swarm issues there is a big lot of sealed brood present, and young bees are emerging by the thousand every day, so that when the first young queen is ready to fly there is a strong force of bees ready to go with her. If you can manage to have the larger part of those young bees unite with the swarm, you increase its ability for gathering surplus, and you at the same time lessen the desire for a second swarm. If you put the swarm on the old stand and at once put the old hive in a new place at some distance, all the bees that were out in the field will go back to the old stand, and all the old bees that leave the old hive the next day or so will return to the old stand. This will strengthen the swarm, and at the same time will weaken the old colony so much that it will generally prevent any second swarm. Not in all cases, however, and if we can do anything to throw a still larger number of bees from the old hive into the new, it will be an advantage to do so.

Now, suppose that instead of putting the old hive in a new place at once we set it close beside the swarm. Then two days later we move the old hive to a new place. All the bees will join the swarm that would have done so had we moved the hive on the day of swarming, and in addition to that there will be all the bees that have turned into field-bees in the two days. If we wait until three days after swarming, the number of field-bees will be still larger, and so the number will increase daily for some time. But we must be sure to move the hive before a second swarm issues. Under ordinary circumstances, we are safe to move it a week after the day of swarming. On that day set it in a new place, and all the field-bees will desert it and join the swarm. You can make the matter still more emphatic if you move the hive at a time of day when the young bees are taking a flight, for all of them that are out when the move is made will also join the swarm. For a day or two no nectar will be brought into the removed old hive, and this, together with the depletion in numbers, will so discourage the bees that they will give up all notion of swarming.

It sometimes happens that at the time when a first swarm is ready to issue the weather is so bad that swarming is delayed for two or three days. In that case the second swarm would issue in less time than usual after the first, making it happen that if we wait a week before moving the hive to a new place, there would be a second swarm before that time. So if there has been bad weather just before the time of the prime swarm issuing, it may be well to move the old hive to a new place in six days or even less time after the day of swarming.

3. I don't know enough about them to answer. I had them on trial last year, but the failure of the honey crop left me no wiser than a year before. It will be wise for you to try the two kinds side by side and decide accordingly.

Keeping Bees on Shares.

As there is but very little said in the text-books in regard to leasing or renting bees, I have concluded to ask a question on that subject, not only for my own benefit, but for the benefit of others that may be interested in bees on shares.

Suppose A should lease to B any number of colonies, from 2 to 50, for a term of five years, B to furnish everything—hives, sections, foundation, etc., and do all the work, rear and furnish queens to keep all colonies up to the standard. What rate of interest should A receive annually? And what would be the value of said bees per colony, if Italians in modern hives? Also the value of common bees in common hives? How many colonies of bees should A receive over and above the number least (if any) at the end of five years?

In answering this question the winter losses and taxes along with increase should be taken into consideration. But we will suppose that B works the bees for comb honey and does not care for increase. INDIANA.

ANSWER.—Very little is said in the bee-books as to bees on shares, for the very good reason that very little can be said that will be of general interest. The one thing that can be said to apply to all cases is that unless everything to the smallest particular is put down in black and white there will almost certainly be misunderstandings. If the bee-books were to give instruction that would cover all cases, it would make a book of itself. Each case is different from all others, and it is not very likely that a full answer to the present question will be of any use to any other reader, as may be seen to some extent by looking up what is said in the last volume of this Journal as to bee-keeping on shares. See pages 11, 26, 122, 598, 662 and 807. On those pages you will perhaps find more on the subject than is to be found in any of the bee-books, and yet from the nature of the case nothing there said is likely to be of much use to the very next one who desires information on the subject. I regret that I cannot give an explicit answer to every question of the kind, but I think you will see it is impossible.

In the present case the question is less involved than in some others. A has a certain number of colonies from which he wants an annual interest. Plainly, he should have the same interest he would get on the amount of money the bees would sell for, with the bees as the only security for getting back his principal at the end of five years. But that leaves the question still open, for the risk depends much on the locality and the kind of a man B is. The rate of interest is always higher where the security is poor. If the locality is one where it is hard to winter bees in safety, where the majority run out of bees entirely in five years or less, and if B is so little skilled that he doesn't know how to succeed in wintering, there should be a good deal more than the legal rate of interest.

At the end of five years, if A has had his interest annually, he should expect nothing more than his regular interest for that year and his principal back.

The value of bees varies with time and place. It may be three times as much in one place as another. I have no means of knowing what they are worth where A and B live. Turning to page 560 of last year's volume, you will see definite prices given by a man with his mouth full of sobs and his voice full of tears. But those prices may be very different from any A can realize. You can know something definite as to the price of bees of those who advertise them for sale, but that doesn't tell what they are in other places.

Questions on Transferring.

1. I have one colony which is hived in a home-made box, nailed up at both ends. There are two sticks inside crossing each other, and the bees have built the combs everyway. I bored some holes in on top and put on a super, but they didn't do anything above. How can I transfer them into another hive? and what can I do with the comb in the old box?

2. How can I clean the dead bees from the bottom, when bottom is nailed? My idea is to take out some frames, scrape an empty space, and brush over the balance of frames towards the clean space. After I get the bottom cleaned I push the frames back in place and put in the ones taken out where they were.

I ought to have a good bee-book so I could learn about bee-keeping. IOWA.

ANSWERS.—1. If you had put in the super a bait, perhaps the bees would have stored in it. As a bait you can put in a piece of comb. Perhaps you will do as well to leave the hive undisturbed till after the bees swarm, then 21 days later there will be no worker-brood present, and you can transfer according to the directions given in the bee-books. By all means you ought to have a text-book for it will hardly do to take up room here repeating all that you will find in the book. If there are nice, straight combs in the old hive, you can transfer them into the new, and the rest can be melted up.

2. Your way will do, but it is rather slow and troublesome. Take the hive off its stand and set in its place a clean empty hive. Lift the frames out of the old hive and put them in the clean one. Now clean out the old hive and it is ready to replace the next one to be cleaned. If your hives are very heavy and you are not very strong, instead of first setting the clean hive on the old stand, go at it in this way: Set the clean hive near by and lift into it half the frames. Then take the old hive off the stand and put the other in its place, when you can move the rest of the combs. If you try it you will probably like your hives better with the bottoms loose.

The Premiums offered on page 62 are well worth working for. Look at them.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Bees and Honey in Illinois.—In the statistical report of the Illinois State Board of Agriculture for Dec. 1, 1898, which is just received, we note the following:

With the exception of 1891, more honey was produced in 1898 than any previous year. By far the greater part of this was produced in northern Illinois, 423,166 pounds, central Illinois reporting but 128,472 pounds, and southern Illinois, 137,802 pounds.

The Dec. 1 price of honey, 12 cents per pound, is the same as in 1897.

The value of this by-product of the farm in the northern division of the State is $50,039; in the central division, $16,837, and in the southern division, $16,604, giving a total valuation of $82,480.

There were 62,054 colonies of bees reported to assessors in 1898.

In view of the almost total failure of a surplus honey crop in Illinois last year, the statement made in the first sentence above is amusing, to say the least. The year 1897 was a phenomenal honey-year—honey almost everywhere.

We often wonder who is responsible for the bee and honey statistics that we see made public from time to time. From their apparent unreliability we fear they are "made up" in some machine shop.

Somnambulist and Fire-Water.—Somnambulist, the delightful dreamer down in the Progressive Bee-Keepers' locality, while gently touching up the editor of this journal for mentioning such an out-of-date remedy as whisky for bee-stings, takes the opportunity of saying that he (Somnambulist) is not a temperance fanatic, being a sort of "middle of the road" man, but doesn't want to encourage in the slightest degree the drinking of fire-water. Which raises some painful questions. Is it possible that the good-hearted Sommy sees so clearly the evils of fire-water that he doesn't want others under its influence, while he is so far under said influence himself that his devious course requires him to get clear out into the middle of the road? Stop it, Sommy. You run risks enough walking in your sleep without the other thing.

Advice to Starters of New Bee-Papers.—Editor Hutchinson, in his February Bee-Keepers' Review, when speaking of the recent improved appearance of some of the bee-papers (notably the American Bee Journal), gives this wholesome advice:

"Let no man start a new bee-journal with any hope of success unless he can make it as neat, at least, as the ones that are now being publisht. Yes, he must go even further, as the friendship between an old establisht journal and its readers is very strong, and, to win them away, something considerably better must be offered them."

Actually, some of the new bee-papers that have come to our desk during the past seven years have been simply a disgrace to the printer's art, and quite unworthy of any notice whatever.

But, surely, Mr. Hutchinson would not suggest that a new paper, or any paper, should try to *win away* the subscribers of another or establisht paper! We have never tried to do that. We would not strive to lessen the number of subscribers of another bee-paper by winning them away, but would simply have them take the American Bee Journal *in addition* to the other paper. *We* wouldn't advise any bee-keeper to drop the Review for the American Bee Journal, but we would *always urge* the Review subscribers to read our paper also. For after a year's trial, we are certain he would have the American Bee Journal regularly along with the Review, that is, if he were really interested in bee-keeping.

The Door Open for the Union.—In a letter received from Mr. Newman recently, as well as in his report publisht on page 120, he says that he cannot longer than the present year act as General Manager of the National Bee-Keepers' Union. In the letter referred to, Mr. Newman says:

"I am working harder and harder and spending more strength and vitality every day than accrue in the short period for rest, and therefore I have concluded to curtail some of my labors outside. I am refusing all calls for lecturing, and shall not undertake to manage the affairs of the Bee-Keepers' Union after this year. Fifteen years of my life are all that I can spare in that direction. The almost unanimous vote for me has been *the only tie* that bound me to the work. I did not feel like refusing my many friends to serve them, but now the "physical" demands it, and as I am now close on to 70, I must consider myself a little, and refuse to sacrifice health and strength to labors that can be as well performed by others."

All know that Mr. Newman has done a grand work in the Union during his many years of faithful service, and for the excellent reasons he mentions, he should not be required to wear himself out further in the interest of bee-keepers.

It has been suggested to us (not by Mr. Newman, however), that the members of the Union might now look with favor upon joining its fortunes with the United States Bee-Keepers' Association. It would seem so to us, and if such is their wish, they will find that the door was left wide open for such uniting of forces, should the time come when the Union felt so inclined. The following paragraph, taken from the report of the Buffalo convention in 1897, will further explain about that "open door:"

"A Member—Mr. President, as there may sooner or later be an inclination on the part of the members of the

National Bee-Keepers' Union to help put the United States Bee-Keepers' Union [now Association—Ed.] on a more substantial basis, both by their influence and their money, I move that a committee be appointed by the President to devise some plan by which so desirable an object may be accomplisht whenever the Advisory Board of the National Bee-Keepers' Union may signify a wish so to do. [Motion adopted, and the Board of Directors appointed as such committee.]"

We republish the foregoing paragraph for the purpose of reminding the Union how nicely the way was left open for them to come into the United States Association, whenever they should so desire. All that is necessary is for the Advisory Board of the Union to express their wish to the Board of Directors of the Association. Mr. G. M. Doolittle is now President of the Union (and we presume chairman of the Advisory Board), and Mr. E. R. Root is chairman of the Board of Directors of the Association.

Now, if the members of the Union's Advisory Board feel that a "wedding" should take place, they could so inform Pres. Doolittle, who would communicate such "wish" to Chairman Root, and likely the contracting parties could be ready to begin "housekeeping" Jan. 1, 1900—the time when Mr. Newman says he must terminate his work as General Manager.

Personally, we had once decided not to speak again of uniting the two organizations in question, but perhaps the time is now at hand when it will be wise to take up the matter and unite under one banner the bee-keepers of this country. We are willing to do what we can to make everybody happy, and if the Board of Directors of the Association shall report, at the next annual meeting, that they had arranged with the Union's Advisory Board to unite the two organizations Jan. 1, 1900, we shall be glad to join in a hearty welcome to the Union's membership, and extend congratulations all around.

Michigan Foul Brood Law.—We understand that a Foul Brood Bill is now before the Michigan legislature, and Editor Hutchinson, of the Bee-Keepers' Review, speaks of it as follows:

"If the legislature thoroughly understands the matter, knows how badly the law is needed, and why it is needed, there is no doubt of its passage. It is the business of the bee-keepers of the State to inform the legislature in regard to the matter.

"If each bee-keeper who reads this will write to his member in the legislature, and fully set forth the reasons why the law ought to be past, it will be past. Don't think that because there is no foul brood in your apiary, nor near you, that there never will be; and the sooner we have this law, and an inspector to look after the matter the better, the less likely is it that it will appear in your yard. Simply write to your member and explain to him the contagious, infectious character of the disease. How it finally destroys an apiary; but that is not the worst of it; bees from other apiaries rob out the depopulated hives, and thus carry home the seeds of the disease to destroy another apiary, and thus it continues to spread from apiary to apiary, unless it is checkt. Call his attention to the fact that it is not the bee-keeper alone that suffers but that the fruit-grower and the horticulturist need the bees to fertilize the blossoms, and thus cause them to bring forth fruits in abundance. Don't get up any petitions. Simply write a personal letter to your member, and it will be read and considered, while a petition will simply be tuckt away in a pigeon-hole.

"Friends, I beg of you, do not neglect this matter. It is important."

We also would have all of our Michigan subscribers at once write their representatives at Lansing, urging the importance of the foul brood law.

To Get Rid of Laying Workers, Mr. Wilson puts over the colony a queen and some frames of bees and brood, doing this toward evening, and has succeeded in each of the half-dozen cases he tried.—Progressive Bee-Keeper.

Mr. N. E. France, Wisconsin's State inspector of apiaries, is speaking daily upon bee-culture at the farmers' institutes. He expects to be through by March 17. As that is "St. Patrick's Day," we presume he will celebrate then!

* * * * *

Mr. Wm. Stolley, of Hall Co., Nebr., writing us Feb. 17, said:

"After a confinement of 22 days, and part of the time 30 degrees below zero, my bees have had three days sporting in the warm sunshine, and they are now in good trim to stand another severe spell of cold weather."

* * * * *

J. J. G., 1800 Prairie Ave., Chicago, Ill., wants a good, trustworthy man who understands bees thoroughly, and who will be an assistant gardener. The position would be in the White Mountains in New Hampshire, town of Littleton, on an estate of about a thousand acres. The situation is a good one, and a permanent one to the right man. Address as above if you think you can "fill the bill," and want the place.

* * * * *

"Pickings from Our Neighbors' Fields" is the title of a new department in Gleanings which gives in condenst form items of interest gathered from other bee-periodicals. It is conducted by "Stenog," which is short for W. P. Root, a man not related by blood to the Roots of Gleanings, but one who has had much to do for many years with the fact that Gleanings is typographically so near perfection. He is stenographer and proof-reader, and what he doesn't know about the ins and outs of punctuation and the fine shades of meanings of words is hardly worth knowing. Withal he has a good stock of the sort of humor of which one never tires. He seems to find pretty good "picking" in the American Bee Journal.

* * * * *

Mr. Thomas G. Newman, of San Francisco, Calif., General Manager of the National Bee-Keepers' Union, writing us Feb. 18, said:

"I have seen in the daily papers of the extreme cold and of the storms and blizzards you have been having in the East, for to *us* Chicago is "East," tho the people in New York think it West, and nearly out of the world. Like all else, the blizzards are but temporary, and soon pass away. The weather here has been cold to us, and very disagreeable much of the time since New Year, but now it is again pleasant and much warmer. We feel the cold here much more at freezing-point than you do in Chicago at zero, because we are not fixt for it, nor used to it, and also on account of the humidity in the atmosphere, and so it always seems to be colder than it really is."

* * * * *

Dr. Peiro, who, as we have reported, visited the Pacific Coast the past summer, speaks thus of the climate of California:

So many wish to know my opinion of California as a climate for persons not in robust health that, with the editor's permission, I am tempted to reply to wholesale enquiries through the American Bee Journal.

For persons in advanced years, to the point of feebleness, or those threatened with a development of serious lung trouble, I would say by all means go to California, and don't stop until you reach Los Angeles or its vicinity. The northern portion of the State as a place of residence for the ailing is from bad to worse—generally worse.

I can imagine no climate more delightful than that of Southern California. But you will do best first to go there, say for a year, and see how you personally like it before you "pull up stakes" at the old home for good.

One thing you must also consider—while the climate is excellent it is a poor place for a working-man without capital to depend upon earning a living. You may do so, but it is best to rely upon a well-filled pocket-book.

Dr. Peiro.

To Prevent a Swarm Scattering into other hives, simply sprinkle the bees with a little water whenever you dump them off the branch on which they have clustered; then they will not take wing, but march straight for the hive in front of them.—F. L. Thompson, in Progressive Bee-Keeper.

Getting Section Honey and Extracted from a colony at the same time, is characterized by G. M. Doolittle in the Progressive Bee-Keeper as a *myth*. So long as there is any room in the extracting-combs, bees will build no comb in sections, even if the extracting-combs are farther than the sections from the brood-nest.

Getting Light Honey from the Wax-Extractor.—Ordinarily the honey that comes from cappings thrown in the wax-extractor is injured and darkened by the great heat required to melt the wax. Rambler finds he can get the honey in good condition by a mild heat long continued. This is secured in a cloudy day, and in a bright sun he makes his own clouds by putting a gunny-sack or something of the kind a few inches above the glass.—Gleanings.

A Point for Large Hives is made by Adrian Getaz in Gleanings, who insists that it is not enough that colonies are strong to overflowing when the harvest comes, but says he gets best results from those that are strong *before* this time, even if no stronger than others when the harvest begins. He thinks that when a colony merely fills up with bees ready for the opening of the harvest, that the workers are not old enough for best results. Practically, the colonies must be strong the preceding fall.

Bee-Keeping in Cuba seems to be a live topic nowadays. W. W. Somerford talks about it in Gleanings. He thinks bell-flower or campanilla honey is finer than basswood, and one who eats it will want more. He tells of 700 gallons pure sugar-cane honey being extracted and unsalable, which the bees gathered the first year of the war from burnt cane-fields. He thinks that competition from Cuban honey need not be greatly feared, as Cuba is not so very large, and not more than half of it will do to keep bees on at all, except as a side-issue.

Practice Better than Theory.—What I have done, and the result, is of far more importance to the world than what I want and why. In other words, if more of our writers would wait about telling us their theories till after they had practiced them for a few years, and then tell us how they workt, and their success, less chaff would appear in our bee-papers, and the fraternity be saved much by not being led to try so many will-o'-the-wisp things, which result in a long "chase" after nothing.—G. M. Doolittle, in the Progressive Bee-Keeper.

Some Interesting Apicultural Figures, in the American Bee-Keeper, are given by G. M. Doolittle. He began bee-keeping in 1869, paying 10 cents each for 6-pound boxes. Got two boxes filled and ate the honey. The next year he sold at 25 cents a pound, boxes costing $16.66 for each 1,000 pounds of honey. In 1872 or 1873, 2-pound sections came in, costing $30 a thousand in the flat, or $40 ready for use. Sold honey in 1874 for 28½ cents, or 27 cents after taking out cost of sections in flat. Then sections fell to $25, $18, $15, $12, $10, $8, and $7. To-day the finest 1-pound sections are $3, and if honey had fallen in the same proportion, section honey would to-day bring 6 cents a pound.

Does the 8-Frame Hive Accommodate the Average Queen?—In answer to this question, C. P. Dadant says in Gleanings

"Emphatically I will say no. Neither do I think that the bee-keeper who makes any tests at all, no matter who he is or where he is, would answer the question in any other way. My experience is that about ⅓ of the queens are crowded in a 10-frame brood-chamber, and that not over one-tenth of the colonies can be sufficiently accommodated with breeding-room in an 8-frame hive; while perhaps only two or three percent of the healthy queens would find this hive too large.

"Perhaps many people will disagree with me, who have never used anything larger than an 8-frame hive, because they judge of the possible strength of a colony by the experience that one may get with such a hive. I beg leave to say that it is next to impossible to judge fairly of this question without first giving a trial to large brood-chambers the year round. It is useless to expect as populous a colony for either spring, summer, or winter, on an average, in a small hive, as in a large one. One might as well expect as large a colt from a pony as from a Norman mare. A greater cluster, a larger space, and a greater amount of stores are bound to produce, with a queen to match, a more satisfactory colony."

Shall Sections be Scraped?—Editor Holtermann, of the Canadian Bee Journal, does not take kindly to the idea that it is better to have sections daubed with propolis so people will think the honey genuine. He says:

"The above reminds me of an incident when out at Farmers' Institute work some years ago. The member of the Government deputation with me was very partial to milk, of which very little, even for tea and coffee, had been upon the table for some time (we were in a newer and colder part of the Province). One day for dinner a jug of milk appeared upon the table. I took half a glass and began sipping it. It tasted so strong of the stable I suggested to my colleague there was no mistake about it; this was genuine cow's milk. He filled his glass promptly and downed half of it before he struck the flavor. It was cow. We do not require to have our honey product in a crude condition to enable an intelligent public to understand it is genuine. It is just as absurd to call for propolized and travel-stained honey as it is to call for hair in butter."

Sweet Clover—Melilotus.—This plant closely resembles Alfalfa, but makes a much larger and coarser growth, and is especially adapted to lime soils. It will make a good growth on any lime soil, even on the white barren lime-hills, where the land is so poor that no other plant will live. Melilotus is of little or no value on the red clay or sandy soils which contain little lime. In this latitude it is a biennial plant, making only a moderate growth the first year, but an excellent growth the second. This plant comes from seed the first year and from roots the second, and will then continue to re-seed itself for years without interference. The seed may be sown late in August or in February, at the rate of ½ bushel per acre, as directed for Lespedeza.

Melilotus, in either the cured or green state, is not generally liked by animals unaccustomed to it at first, but they soon learn to relish it, and it is very nutritious either in the green or cured state. Melilotus starts into growth early in the spring when other green forage is scarce, and stock learn to like it quickly. This plant not only furnishes a large amount of grazing, but has few equals as a soil-improver.—Mississippi Experiment Station Bulletin.

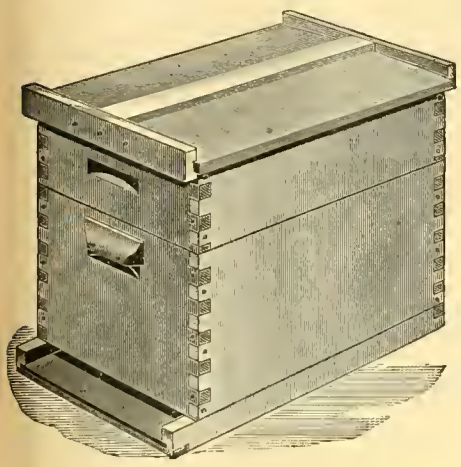
Tar Odor a Cure for Foul Brood.—Loyalstone says in Australian Bee-Bulletin:

"I got some foundation, wrapt a piece of cheese-cloth over it, then I got a box of thin wood, placed two pieces of tarred felt in the bottom of it, put the foundation in cloth on top of this. Then put two more pieces of tarred felt on top. Put this in a warm place for three weeks, when the foundation had inhaled the tar it smelt very strong. I then hived two swarms bad with foul brood in a fresh hive with starters made of this foundation, and hived two other swarms bad with foul brood in a fresh hive with starters of ordinary foundation, with this result: The two swarms hived on tar-smelling foundation showed no sign of foul brood. The other two hived on ordinary foundation were again attackt with foul brood. So again I experimented. The worst of these two I hived in a fresh hive with starters of tar-smelling foundation. The other I hived in a fresh hive with ordinary foundation. Again the hive with anti-foul-brood foundation showed no signs of foul brood, whereas the other one was infected. The last I transferred into a fresh hive with anti-foul-brood foundation, and it showed no signs of foul brood. I then got a lot of thin cakes of wax and put in a box in a warm place surrounded with tarred felt, and in six weeks the smell of the tar was so strong in the wax that you could not boil it out. The more the wax was boiled the stronger was the smell. Make this wax into foundation and foul brood will not trouble you. It has not in the many cases I have tried.

Root's Column

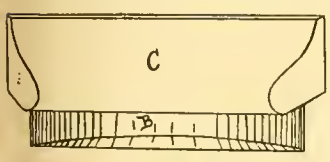
HAND-HOLE CLEATS FOR HIVES.

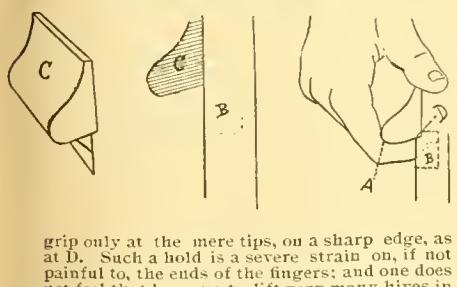
We have finally got them perfected—or at least so they suit us, and now offer them in all our Dovetailed hive combinations. They are nothing more nor less than short pieces of moulding beveled at each end, and nailed so as



to come directly over the top edges of the hand-holes, as shown above. The following illustrations show a little more of the detail.

Perhaps the question may be askt WHY the hand-hole cleat alone would not be sufficient. It is much more convenient than the hand-hole alone; and the two in combination are far better than either alone. When one tries to lift a 50-pound hive by hand-holes, his fingers can get a





grip only at the mere tips, on a sharp edge, as at D. Such a hold is a severe strain on, if not painful to, the ends of the fingers; and one does not feel that he cares to lift very many hives in this way; but if he can get the heft of the weight on the middle joints of the fingers, as at A, and on a rounding edge, he can lift all that his back will stand.

We sell these cleats separately when called for, at 75 cents per 100, or $6.00 per 1,000. They can be attacht to hives already in use; and where they are to be moved to out-yards, or handled very much, these cleats are a great convenience, and worth many times their cost.

Dr. Miller wants his cleats to go clear across the hive. If there are those who prefer to have them so, we can supply their hives with such, but the price (of the cleats) will be twice as much as for the short ones, and will be supplied only from the factory, as our dealers will keep only regular goods.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bee-Keeping in Arizona.

Last season I ran my apiary for extracted honey, and colonies averaged about 80 lbs. My neighbor, Mr. Glasscok, had 140 colonies, and they averaged 40 pounds of comb honey, which is rather a poor crop here. The alfalfa was a failure, but the old reliable mesquite never fails here, and we are always sure of a fair crop; it yields a milky white honey, much like the alfalfa.

The prospects are good for next season, as there has been plenty of snow and rain in the mountains, and bees are in fine condition at the present writing.

All the practical bee-keepers here use the Langstroth hive, while a great many use box and old hollow log, and call the queen-bee a "king."

The first honey-bees were kept here about 16 years ago, which were shipt from California. There were 10 colonies brought on an ox-wagon. Now the timber and rocks in the mountains are full of bees. There is a fly here that ruins the alfalfa honey one year out of three. It seems to suck the bloom to death.

W. D. JEFFERSON.

Graham Co., Ariz., Jan. 3.

The Bee Journal Helpt Him.

I commenced with one colony in the spring of 1895. I now have 22 colonies packt on the summer stands. I think they are in good condition. I owe my success so far to a careful reading of the American Bee Journal. D. W. WILL.

Somerset Co., Pa., Jan. 16.

Report for 1898.

In the spring of 1898 I sold five colonies, and had 54 left, which increast to 91, by natural swarming, and 1500 pounds of comb honey. I peddled it out at 10 cents a pound except a little in spring that was not so good, which I sold at 8⅓ cents.

A. R. YANDELL.

Indian Territory, Jan. 17.

Bees Have Frequent Flights.

My bees have flown out more or less nearly every day this month. They are doing all right so far as I know. I have 18 colonies in the cellar that can't enjoy this nice weather to fly out. NOAH MILLER.

Iowa Co., Iowa, Jan. 24.

Something About Bee-Stings.

Seeing several articles in regard to bee-stings, I may have a word also. From the action of the poison it seems to be of the same nature as a snake-bite, and no doubt if the same or equal amount of the poison were forced into the circulation its effect would prove equally fatal. I used to be very susceptible to the effects of bee-stings, but after a continued interview of the business end of bees for about 30 years it does not affect me so seriously. But there are several things to do in case a sting is received, and several not to do, i.e., don't attempt to pull out the sting the first thing, but leave it right where the bee put it. The reason for this is, a bee's sting is barbed like a fish-hook, and the sac containing the poison is always left with the sting; any attempt to pull it out only forces more poison into the wound. Don't stand near the hive any longer than necessary after being stung, but move back gently a few feet, as the smell may anger more of the bees. Don't make any quick demonstrations, but move gently and quietly out of the immediate vicinity. Before you go among the bees provide yourself with a little salt where you can get it handy, and a small

Tomato Vaughan's Earliest of All

Earliest Good Tomato. Absolutely first of 200 kinds. Medium in size, slightly wrinkled, but of first quality and first in the market. Large package 10 cts., only, with our complete 1899 catalogue, "A MIRROR OF AMERICAN HORTICULTURE." It tells the whole story of the garden, lawn and farm. We also make following bargain offers to prove that Vaughan's flower seeds and bulbs are the best in the market.

SIX MOST POPULAR FLOWERS.

1 pkt Sweet Peas, 25 kinds 1 pkt Mignonette, Giant
1 pkt Giant Pansy, 12 kinds 1 pkt Morning Glory, Giant
1 pkt Nasturtium, Mad. Gunther 1 pkt Cosmos, New Early

The above six kinds for only four 2c stamps (8c).

7 Bulbs for 14c.

1 Begonia 1 Easter Lily 1 Cyclamen
1 Black Calla 1 Gladiolus 1 Gloxinia
1 Tuberose Catalog Free with every order.

Vaughan's Seed Store,
New York, 14 Barclay St. CHICAGO, 84-86 Randolph St.
Please mention Bee Journal when writing.

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

ROCKFORD POULTRY FARM.

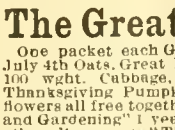
FREE! A young cockerel or one setting of eggs to the person suggesting the best name for a Cornish Indian Game cockerel that is taking the first prize wherever shown. We also have a fine lot of Light Brahmas, Barred Plymouth Rocks and White Wyandottes. Send 10c for catalogue. Lice Killer Formula and particulars.
Box 875 Rockford, Ill.

6A4t Please mention the Bee Journal.

The Greatest Seed Offer

One packet each Great Pre-Historic Corn, New July 4th Oats, Great Kuttawa Dwarf Tree Tomato, 100 wght. Cabbage, Imp. Bacana Musk Melon, Thanksgiving Pumpkin and five packets beautiful flowers all free together with "Up-to-Date Farming and Gardening" 1 year (50 cts.) and the greatest of all poultry papers "The Poultry Keeper" 1 year (50 cts.) all these for only 75 cents. Send at once for the February "Poultry Keeper" and read about it. Address, Poultry Keeper Co., box 10, Parkesburg, Pa.

Ctf Please mention the American Bee Journal.



HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating EXCELSIOR INCUBATOR
Thousands in successful operation. Lowest priced 1st-class hatcher made
Circulars free. Send 6c. for Illus. Catalog.
GEO. H. STAHL, 114 to 122 S. 6th St., Quincy, Ill.

44A26t Please mention the Bee Journal.

The "Emerson" Binder.

The Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson" no further binding is necessary.

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

FROM MAKER TO USER DIRECT AT WHOLESALE PRICES

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Buggies $35 and Up.

"WINNER" TOP BUGGY $35.00

Thoroughly good. Fully guaranteed. No better one retails for $60. Such a price with quality is only possible under our plan of business.

We sell you direct from our Factory At Wholesale Prices.

Surries, Phaetons, Buggies, Spring Wagons and Road Wagons. Our vehicles excel in quality of stock, material, workmanship, finish and style. We make every vehicle we advertise. In Single and Double Harness everything you could wish. An excellent single Harness as low as $4.80. Illustrated catalogue sent free. All prices marked in plain figures. Write at once Address,

EDWARD W. WALKER CARRAGE CO.
50 Eighth St. GOSHEN, INDIANA.

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SOLD ON TRIAL!

Buy no Incubator and pay for it before giving it a trial.

Many people have lost faith in Incubators because they bought one that was never intended to hatch chickens—made merely to sell.

The Von Culin Incubators are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c.

Von Culin Incubator Co. 5 Adams St. Delaware City, Del.

BARNES' FOOT POWER MACHINERY

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES,
5Ctf 995 Ruby St., Rockford, Ill.

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Beats 'em all.

JUST AS NATURAL as the old hen and a good deal more reliable. Doesn't break its eggs or make its chicks lousy. Doesn't stay off the nest and allow the eggs to chill but hatches every egg that can be hatched. THE PETALUMA INCUBATOR

is absolutely perfect as to incubator essentials—proper application and distribution of heat and moisture, regulation and ventilation. For 50 to 350 eggs. WE PAY FREIGHT ANYWHERE in the U. S. Handsome catalog free.

Petaluma Incubator Co., Box 91 Petaluma, Cal.

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The American Poultry Journal

325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

American Poultry Journal.

50 cents a Year. Mention the Bee Journal.

The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

THE RURAL CALIFORNIAN,
218 North Main Street, - LOS ANGELES, CAL.

Please mention Bee Journal when writing.

(ounce) vial of the best whisky; immediately swallow about one teaspoonful and lay a little salt on the sting and wet it with the whisky. You will, if not a drinking person (and no bee-keeper should be) feel the poison going into the circulation from the wound and the whisky from the stomach. This is the only remedy I have ever found, if I except the exudations from the ear, i.e., ear-wax, which will stop the pain of a sting *instantly*, but it is not always attainable.

After the salt and whisky are applied, let the sting dry up, and then remove it with a knife. But you can go right back amongst the bees without fear of their smelling or being angered, as the whisky and salt kills the smell as soon as applied.

Garland Co., Ark. J. H. HERMANCE.

[We fear that if some bee-keepers should take a swallow of whisky every time they are stung they wouldn't be able to do much with bees or anything else. We would much prefer to endure the pain of the sting than to swallow the whisky. We are too old to begin to take whisky, and wish the vile stuff had never been invented. The world would be better off without it.—EDITOR.]

Almost Discouraged.

I have become almost discouraged in the bee-business, with three years of failure. Formerly this was considered one of the best locations in central New York. Last spring my 105 colonies came through without any loss, and in good condition. I was looking for early swarms, and tho the spring was cold and wet my bees increast and filled the hives with bees, but refused to swarm, and they continued throughout the season. I had no increase, and but about 500 pounds of poor honey in the supers, with my bees in fair shape for the winter, that is, with plenty of honey and bees.

One of my neighbors sprayed his fruit-trees last spring, and I claim that it killed the bees for he did it while the trees were in full bloom. H. ROOT.

Cortland Co., N. Y.

Wintering and a Report.

I am trying wintering bees again in my frame building. The four colonies came out all right last spring, and I increast to 11 and got 300 pounds of extracted and comb honey. I think they have plenty to winter on also, and a few frames for spring, if needed.

Last winter I set the hives in a row, and covered them all around below as above with a foot or more of oats chaff, leaving a spout of two or three inches through the chaff to the open space inside, to give them air. I likewise gave them two one-inch holes through the honey-boards on top, covering them with wire-cloth and sacking to keep out the dust.

This year I have built them three deep, and covered them in chaff in the same way, and now wait results.

If all is favorable in the spring I would like to double my number of colonies, and do it by dividing. They were put in the first week of November, and we do not look for them getting a flight before the first or middle of April, or later. I think the dividing plan suits my time and idea better than watching for swarms.

R. MCCRADIE.

Norman Co., Minn., Feb. 6.

Some Good Southern Honey.

Having seen so many expressions in the American Bee Journal as to the poor quality of Southern honey, I send a sample, under separate cover, of gallberry honey, to get your opinion.

About 18 months ago I sent a sample of the poorest honey I produced that year (1897) and I was surprised when you said it was "better than the usual samples of

MONEY IN MELONS

BUCKBEE'S NEW STRAWBERRY MELON

This grand melon was originated by planting the most luscious variety of strawberries between every other row of a Perfected Hybrid Melon.

Write to-day FREE! Mention this paper

and will send you a sample package of this wonderful Melon together with my Beautiful and Instructive Seed and Plant Book; tells all about the best varieties of Melons—how to grow them for profit, and everything of interest in seeds, plants, etc.

H. W. BUCKBEE ROCKFORD SEED FARMS Box 537 ROCKFORD, ILL.

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TWO WAGONS AT ONE PRICE.

It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc. The man who already has a wagon may have one of these low

handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 16, Quincy, Illinois, for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

Mention this paper.

EVERGREENS

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 5 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

D. HILL, Evergreen Specialist, Dundee, Ill.

3D8t Please mention the Bee Journal.

The Midland Farmer

(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,

Wainwright Building, ST. LOUIS, MO.

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SPRAYING

with our new patent KEROSENE SPRAYERS

is simple indeed. Kerosene Emulsion made while pumping. 12 varieties Sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."

THE DEMING CO. SALEM, OHIO.

Western Agents, Hennion & Hubbell, Chicago. Catalogue and Formulas Free.

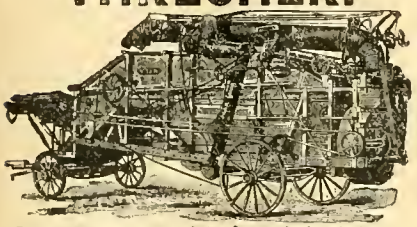
Glass Honey-Jars

For 3-4 Pound at $3.50 per Gross.

We have on hand a limited supply of tall, straight, white-glass Honey-Jars holding ¾-pound each. They have a tin cap that screws on the glass. They are very attractive for the retail grocery trade. Put up in barrels holding exactly one gross each, f.o.b. Chicago, $3.50 per gross; 5 gross, $3.25 per gross. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, - CHICAGO, ILL.

THE NEW
RUMELY THRESHER.



It possesses so many points of superiority that every farmer should demand its use when he has his grain threshed. Combines all the points of the apron and vibrator principles. It threshes fast enough to suit the thresherman. It threshes clean enough to suit the farmer. Catalogue of Rumeley Threshing Machinery, Engines, Horse Powers, Saw Mills, etc., FREE.

M. RUMELY CO., La Porte, Ind.

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40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free.
JOHN NEBEL & SON,
5Atf HIGH HILL, MISSOURI.
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SENT FREE
Our descriptive circular and price-list of
Bee-Hives, Italian Bees
Queens, Sections, Comb Foundation, Bee-Veils, Smokers, Honey-Knives, etc. SEND FOR ONE.
Address, **F. A. SNELL,**
1A13t Milledgeville, Carroll Co., Ills.
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A VALUABLE BOOK
ON POULTRY FOR 1899 FREE.
Something entirely new; the largest out; worth $25. to anyone. Tells all you may want to know about poultry. How to build poultry houses and MAKE BIG MONEY with poultry. Send 15c. for postage and mailing. JOHN BAUSCHER, Jr.
Box 91 Freeport, Ill.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

DITTMER'S
Comb Foundation
Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

GUS DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

A MINIE-BALL
won't "sweep an avenue," but its screech will call attention. These little ads. may remind you we have larger ammunition for the asking. Write us.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
Please mention Bee Journal when writing.

Southern honey received;" so please let me know what you think of this.

The past season was quite satisfactory here. I had 500 pounds of as nicely put up white comb honey as I ever saw (and I have lived in Iowa, where we had white clover); also 200 pounds of extracted, from 20 colonies, spring count, and increast to 22. I have sold it all at good prices, and could have disposed of as much more had I had it.

I expect to double the number of colonies this winter (by purchase), and hope to do even better this year.

ERNEST W. HALSTEAD.
Jackson Co., Miss., Jan. 17.

[The sample of honey arrived in good order, and is most excellent in flavor and body. It would suit us almost as well as the best alfalfa. No wonder it sold at good prices, and people were looking for more.—EDITOR.]

Bees are Quiet.

Bees are very quiet. I have 27 colonies. I did not get much from them last season.

G. H. LAWRENCE.
Juneau Co., Wis., Feb. 5.

Results of the Season of 1898.

Bees did not do a very big business here last season. I had 16 colonies in the spring, increast to 24, and got 700 pounds of comb honey. They are in good shape now, and wintering well. I will try the Golden method next summer. H. D. STEPHAN.
Wabasha Co., Minn., Feb. 7.

Fire in a House-Apiary.

I had an experience in rendering wax which for speed beats anything I have ever seen, but I cannot say that I care to use it. I keep my bees in a house-apiary; the bees are on the south side, with supers, extra hives, tools, etc., on the north side. My extracting-frames and combs of honey I keep in a cupboard. Last night, from some unknown cause, the place caught fire. I live in the village, and the fire department was soon on hand, and gave the best of service. Everything on the north side was destroyed, but my bees are all safe and sound. Some of the hives are scortcht, but a little paint will remedy that.

J. M. DONALDSON.
Worcester Co., Mass., Jan. 27.

Poor Year for Bees.

We started in last year with 25 colonies, and saved 16 swarms, 5 of which died, leaving us with 35 colonies.

Last year was a poor one for bees in this locality. We got only 309 sections of good comb honey. I have been taking the American Bee Journal for nearly a year now, and have found it very instructive and useful. W. Z. FONTAINE.
Davidson Co., Tenn.

A Maryland Bee-Keeper's Report.

We are now having very nice weather, yesterday the thermometer indicating 70 degrees, and the bees were taking a good flight and doing a little house-cleaning, getting ready for spring. My bees are on the summer stands with lots of honey. I have them protected on the West with boards and fodder, and face them to the East. But we had some very cold weather about the holidays, but only for a few days at a time. New year's night, or the morning of Jan. 2, the temperature was down to 14 degrees below zero. It is feared by the peach-growers in the mountain belt that it has frozen the peaches, but lucky for the bees, they pulled through.

The honey crop was short last year—too wet and cold in the spring. I could not complain much, as I had an average of about 30 pounds per colony. I had a field

Improved Farm For Sale

Near the best market and best shipping point in West Michigan. NOW TACKLE THE SUGAR BEET.

A. & O. BAXTER, Muskegon, Mich.
8A5t Please mention the Bee Journal.

HOW TO START
In the POULTRY BUSINESS and how to make it a complete success is the theme of our POULTRY GUIDE. Tells all about poultry houses, how to build, cost, &c., and how to breed, feed and market fowls. Treats also of the famous **CYPHERS INCUBATOR** which is delivered freight paid to every purchaser. This machine requires absolutely no artifical moisture. Send 10 cents and get the book. Circulars FREE.
THE CYPHERS INCUBATOR CO. Box 50 WAYLAND, N.Y
Please mention Bee Journal when writing.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—
The Pacific Rural Press,
The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.
J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

Sent Free Our large Illustrated catalog of Bees, Hives, Smokers, &c Address,
Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.

We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

Bees Wanted FINE LAND
At $5.00 per acre to trade for bees.
HARRY McCARTER,
9A1t Dodge City, Kans.

ALBINO QUEENS If you want the most prolific Queens—if you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.
9A26t J. D. GIVENS, LISBON, TEX.

Those Wonderful Dogs.

We received the Scotch Collie Male Pup all right and am very much pleased with him. We think you made a good selection.—Horton Longyear, Lansing, Mich., Feb. 9, 1899.

Our Scotch Collie male pup arrived in splendid condition. He suits Mrs. B. splendid, and we think he will make a fine dog.—Rev. D. M. Buchanan, Manch Chunk, Pa., Feb. 7, 1899.

The Scotch Collie male pup which we received a week ago is doing first-rate and seems very intelligent. We are well pleased.—W. J. Snyder, Mowequa, Ill., Feb. 3, 1899.

The pair of Scotch Collie male pups received last week are very nice.—A. F. Carlson, Renovo, Pa., Feb. 9, 1899.

I received the three Scotch Collie pups last week all right. I am well satisfied with them. They are the pets of the whole family.—Henry McConnell, Arnot, Pa., Feb 2.

The Scotch Collie pup arrived all right. He is as fine a little fellow as I ever saw. Think he will be grand as he grows older. In fact I am more than pleased with him.—Mrs. J. H Ellingwood, E. Lexington, Mass., Feb. 2, 1899.

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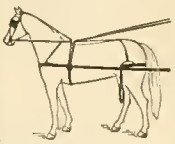

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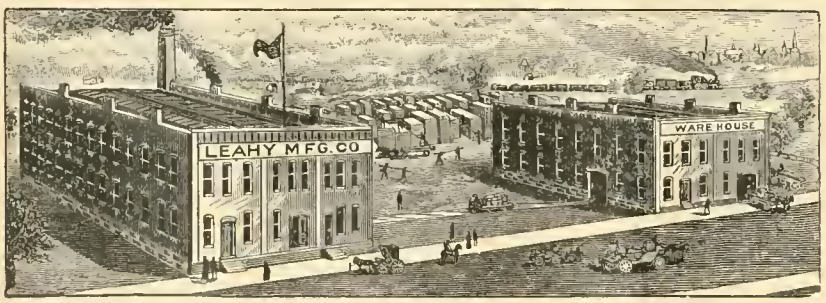

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of 20 acres of sapling or peavine clover for my bees to gather from, and they made good use of it, too. I got a little over 1,000 pounds of nice honey, but the sections were not filled very heavy. I shipt 600 pounds (nearly 700 sections) to Washington, D. C., and it netted me little over 12 cents per section; and the other 400 pounds we will eat. We have seven in the family and all big honey-eaters.

I purchast a few colonies Jan. 21, for from 25 to 50 cents each. Some were in old nail kegs almost falling to pieces, and some in the old Stoddard hive, patented in 1848. I purchast them along the mountain near McClean's Lookout, during the battle of South Mountain and Antietam.

L. A. HAMMOND.

Washington Co., Md., Jan. 23.

Bees Did Well Last Year.

I have some 20 colonies run for extracting. We did well last year, getting more honey than we ever got before. I can sell all we get. I have been a bee-keeper all my life, but only knew bees sting and gather honey until three years ago, since when I have read the American Bee Journal and other bee-literature. I am 60 years old, and am an invalid, yet able to attend to a limited number of colonies of bees.

W. A. THOMPSON, SR.

Franklin Co., Va.

Wintering on the Summer Stands.

My bees are wintering well on the summer stands. I have some in chaff hives. All are doing well so far. They have had three good flights, but I never saw so many dead bees in wintering as this year.

HENRY LOHAUS.

Platte Co., Nebr., Jan. 28.

Improvements in Wax-Extractors.

I have been giving the solar wax-extractor some study, and anything that appears in the bee-papers upon that subject immediately commands my attention.

Mr. W. L. Porter's paper and the discussion that followed at the recent meeting of the Colorado State Bee-Keepers' Association, was of interest, and among other things I note what is said about the material that is put into the extractor, sliding on the pan and damming in a mass at the lower end. Persons who have access to Gleanings in Bee-Culture for Jan. 15, will note an illustration and the efforts I have been making to overcome some of the objections in the ordinary solar wax-extractor.

Instead of making the delivery at the end I make it at the side. The pan is made of tin, and can be adjusted in various positions from nearly horizontal to quite an incline. Upon the delivery edge I have a dam or strainer of coarse-mesh wire-cloth; there is no damming of refuse in this extractor, and the wax is rendered quite rapidly. I think a can four feet in length and 20 inches in width is sufficiently large to render all the cappings and scraps from a large apiary.

My primary idea for a side delivery was to allow the quick exit of the honey usually mixt with the cappings, and to save the honey from becoming darkened by heat; this is greatly promoted by shading the extractor while the honey is being rendered, and then giving the residue the full rays of the sun.

This extractor was made in the backwoods of Siskiyou Co., Calif. I have plans now for another for this southern country, which will be a little more finisht in appearance, and with a wax-caking attachment.

I hope the Colorado friends will have their extractor illustrated, for it is only by comparing notes that we can improve and approach perfection. J. H. MARTIN.

Los Angeles Co., Calif.

[We should be pleased to give an illustration of both Mr. Martin's and the Colorado extractor, if they will please send us either drawings or photographs of them.—ED.]

THE GREAT "Grippe" Specific

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The inhalation of this Oxygen Treatment is really wonderful, and is the nearest possible specific for the cure of **Consumption, Spitting of Blood, Asthma, Bronchitis, Hay Fever, Grippe** and all diseases of the **throat and lungs.** Don't give up hope before faithfully using this remarkable Oxygen treatment!

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Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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Please mention the Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 16.—This month trade has been of small volume in comb honey, due perhaps to the extreme cold that has made transportation dangerous, we now look for a better movement; yet the season is drawing to a close, as after the middle of March there is practically none sold until the new harvest is ready.

Fancy grade of white comb, 13c; travel stained and light amber, 11@12c; amber and dark, 8@10c; candied and mixt colors, 6@7c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 27@28c.

R. A. BURNETT & CO.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c.

M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good, Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, Feb. 8.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, Feb. 8.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & CO.

BUFFALO, Feb. 24.—Closely cleaned up on fancy one-pound combs; such kinds move brisk to-day at about 12 cents. Other grades have cleaned up mostly, but few remaining which are selling at 9c down to 7c. Extracted honey not much used here; stray lots 5@6c. Fancy pure beeswax, 30@33c; common, 22@28c.

BATTERSON & CO.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

MILWAUKEE, Jan. 9.—Fancy 1-lb. sections, 12½@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber, 8@11c. Extracted, in barrels, kegs and pails, 6½@7½c; dark, 5@5½c. Beeswax, 25@27c.

The condition of the market is favorable for shipments of honey, especially of best grades, which are in small supply. The sales are moderate, but we are expecting an increast demand and good trade this spring.

A. V. BISHOP & CO.

SECOND-HAND Sixty-Pound Cans For Sale Cheap.

We have another lot of about 300 second-hand 60-pound Cans, two in a case, that we offer, while they last, in lots of five or more cases (10 cans) at 40 cents a case, f.o.b. Chicago. They are in good condition. Better order at once if you want some of them. Address,

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There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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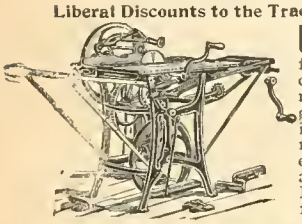

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Why does it sell so well?

Because it has always given better satisfaction than any other.
Because **IN 22 YEARS** there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

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Langstroth on the Honey-Bee—Revised.
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A beautifully illustrated paper called "The Corn Belt" is published every month and contains a quantity of interesting information about the farm lands west of the Mississippi River. Pictures of all sorts of farm scenes in Iowa, Missouri and Nebraska. Personal experiences of farmers who went to those states from the East years ago. The handsomest farm paper published. Send 25 cents for a year's subscription to **THE CORN BELT, 209 Adams St., Chicago.**

Think of the Future. Don't Rent. Establish A Home of Your Own.

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Why send West for your SUPPLIES, when you can get them near home, in less time, with less freight to pay, and at as low prices, quality considered. We keep in stock several carloads of

HIVES, SECTIONS, COMB-FOUNDATION, SMOKERS,

in fact, nearly everything a bee-keeper needs. We also have at Glen Cove, L.I., two apiaries, and sell from them

ITALIAN BEES AND QUEENS.

Untested Queens, after March 15, 70 cts.; 3 for $1.80; Tested Queens, $1.25 each. Colony of Italian Bees with a Tested Queen in a complete Hive, $7.50. Catalog free. Fertile Eggs from heavy-laying White Wyandots, $1.00 per 13; $1.50 per 26.

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MARCH 9, 1899. No. 10.

CONTRIBUTED ARTICLES

Influence of Locality on Bee-Management.

BY ADRIAN GETAZ.

THIS title sounds somewhat like a joke. A few years ago, when something happened that was not fully understood, it was customary to attribute it to the "strain of bees;" later on, the accusation was made against the "locality." Nevertheless, it is true that the locality, or rather the climate, the length and character of the honey-flow, and several other circumstances, including the methods of management and the awkwardness of the keeper, play an important part in the results obtained.

WINTERING BEES.

Among the periodical articles that appear regularly every year or so in the different bee-papers, is one by Mr. Doolittle, to the effect that the bees dying in small groups outside of the main cluster, during the winter, are old bees which went off for the purpose of dying. This statement has often been denied, and many have said that the bees thus found were those unable to reach the main cluster in time, and simply died of cold.

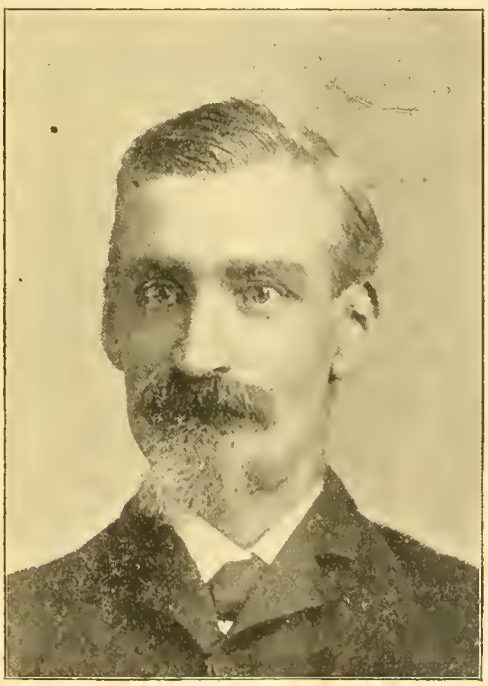
My own experience is in accordance with this last point of view. I frequently find small clusters of bees between the outside combs, that have evidently died of cold because the main cluster beyond has receded and thus withdrawn its warmth. Or, sometimes they have eaten what honey was around them, and on account of a too low temperature failed to go around the combs and reach another part of the cluster or of the honey.

Mr. Doolittle is a very careful observer, and his statements are always correct, or practically so. In this case the difference of opinion can very easily be accounted for. Doolittle winters his bees in a cellar, or rather a repository, in which the temperature remains at about 40 degrees during the whole winter. The inside of the hives outside of the cluster must be higher by a few degrees. Under such circumstances (shall I say "locality?") I think those of the bees that may be separated from the main cluster, or get out of stores, can crawl around the combs and reach a better place.

In my "locality" the case is altogether different. I winter my bees outside. The climate during the winter is very variable. To-day the bees may fly freely. A cold wave comes, and in 24 or 36 hours the mercury may drop away below the freezing-point, if not below zero. What are the consequences? During the warm days the cluster of bees expands considerably, they fly out freely, and when the night comes they occupy the spaces between several combs. When the cold comes, the different parts of the cluster contract, and those numerous enough can keep warm easily, but the smaller portions between the outside combs cannot, and before long the weather is too cold to permit them to go around the combs and rejoin the main cluster. I think that some passage-ways through the combs would help them greatly in such cases, and I am going this year to try some arrangement of that sort.

STIMULATIVE FEEDING OF BEES.

This is another of Mr. Doolittle's periodical subjects. He objects to it. And let me say here that on this point Doolittle has often been misunderstood, or misquoted. Many times it has been said that Doolittle is not in favor of feeding. That's wrong. Doolittle says positively that unless there is plenty of stores in the hive, the bees will not breed freely, and if there is not plenty all the time, feeding must be done. He calls plenty the equivalent of two combs of honey.



Adrian Getaz.

What Mr. Doolittle objects to is the feeding of a small quantity of honey every day, or every night for the purpose of stimulating brood-rearing. On the other hand, quite a number of our best honey-producers practice successfully that kind of feeding.

This is a question not of "locality" but of manage-

ment. Mr. Doolittle practices what is called "spreading the brood-nest." That is, every few days he goes over his colonies, takes the center combs, which are full of brood, to the outside, and those that have but little brood he puts in the center. In doing this, he compels his bees to rear all the brood that they can take care of. Under such circumstances, stimulative feeding could not add anything to the amount of brood reared.

The others obtain the same result by stimulative feeding, and if they were to add brood-spreading to it, they would probably find no advantage in it. It is simply a choice between the two methods.

SPACE FOR QUEENS.

Some time ago Mr. Dadant said that one reason for having a pretty good sized brood-nest is, that if the queen has only a few combs she may have to go over a good deal to hunt up the empty cells, and therefore lose quite an amount of time, while with plenty of comb space there will always be some cells within reach. To which Mr. Doolittle retorted that *his* queens didn't have to hunt up space to lay in. Whether their queens spend much time in hunting up space or not is evidently a matter of "guess-work." As both "guessers" are experienced bee-keepers, their "guesses" must be pretty near the truth. And here Doolittle's brood-spreading explains the difference in their opinions, for by it he gives his queens plenty of space to lay, and at the best place, that is, the center of the brood-nest.

THE TWO-STORY BROOD-NEST.

On commenting on the subject of a two-story brood-nest, Mr. Hutchinson suggests that it might be as well to add one or two supers to the first story instead of a second brood-nest story. This is unquestionably a question of "locality." If I understand rightly, E. R. Root wants to add the second story at a time when the honey gathered is dark and comes in moderate quantity, and replace it by supers only when the more abundant flow of white honey comes, preferring to turn the dark honey into bees. These bees are to gather the white honey which follows.

If the honey-flow is of short duration, I should think better to put on supers at once than to rear bees that would be too late to help during the flow. In "my locality" the flow is never very heavy, and is very irregular, and the only way I can obtain some surplus is to keep the colonies very strong throughout the whole season, so they can take advantage of whatever flow may come at any time.

Knox Co., Tenn.

Securing a Foul Brood Law in Illinois.

BY J. M. HAMBAUGH.

I AM really gratified to see our old friends in "Suckerdom" taking such aggressive and bold steps for the obtaining of a foul brood law in that State.

Mr. Stone, as you know, is an old "wheelhorse," and always ready for battle, and many a tilt have we had in defense of the bee-keepers' interests in the days of "Auld Lang Syne."

As for Mr. Dadant, every blow that he administers is a "sledge-hammer blow," and now that he has appeared above board in the aggressive vindication of the foul brood law, we shall expect good results to emanate therefrom. And now, fellow bee-keepers of my native State, wouldn't it be a grand idea for you to bring proper influences to bear that would elevate Mr. Dadant to the dignity of a "Member of the Illinois General Assembly?" You would have a powerful exponent of your rights and privileges in the law-making machinery of the State. With such a member (if he is a Frenchman) to entrust to his keeping such a measure as the foul brood law as now proposed, you could rest assured that his keen foresight would quickly map out the ways and means by which to bring about the necessary votes and support of the Bill to enact it into law. He would reason like this:

Never can this proposed measure be gotten upon the statute books without the necessary number of members in both branches of the legislature to approve of the Bill, and the governor to sign it; and in order, first, to bring this about, the members must first be convinced that there is some true merits in the Bill.

Secondly, that it is really and absolutely wanted by their constituency.

Thirdly, that it will utimately achieve the ends at which it is aimed.

And now, in order to bring this about, he must bear in mind the old adage, "Eternal vigilance is the price of success." He must know also that there is work to do. He must not only have a strong representative lobby before the committees of the two houses, but from all parts of the State must come strong appeals from the constituent bee-keepers, to the various members composing these committees, to vote favorably on the measure. The more cudgels that can be wielded over the heads of members by their constituents, the better; and remember, that a favorable consideration of a Bill before the committee is equivalent to one-half the battle.

After the Bill is favorably considered, see after the measure closely that it is not pusht to the rear and "pigeonholed," but promptly brought to its place on the calendar.

And now is the time for the importuning of the members for a favorable consideration, with all the force that can be brought to bear, from every bee-keeper that can be mustered into service, in the way of writing to their representatives and senators, and sending petitions, etc., in behalf of the measure, and see to it that a strong, vigilant vanguard is ever on deck to throttle opposition in whatever way it may present itself, by counter active arguments and work from its advocates and the opponents' constituency.

And now, fellow bee-keepers, if you are in earnest and need the law, it is your duty to work for the same. I appreciate Mr. Stone's energy and grit. I know him of old, but it is not within the province of any one man to convince a whole legislative body of men to enact a law, where there is no approval at his back from the people who are directly interested, and a legislator is quick to note this point.

Now, as neither Mr. Dadant nor Mr. Stone are members of that "disreputable" body, you must secure the services of the next best man you can get, and, let me beg of you, don't get one to introduce the Bill and then sit back and let the Bill take care of itself, as was done with a former foul brood bill, which I have a recollection of. It was a case of "The father of the Bill didn't father it."

San Diego Co., Calif.

[No doubt Mr. Hambaugh's advice is most excellent, whether it be Illinois, Michigan, or any other State that is attempting to secure a foul brood law. Mr. H. ought to know, for he was at one time a member of the Illinois legislature.—EDITOR.]

A Prayer for the Night-Time.

BY HON. EUGENE SECOR.

O cover my senses, thou Giver of sleep,
With the night of Forgetfulness over;
May slumber be restful, and trustful, and deep,
Till daylight return, daily rover.

The morning will break on a world of unrest;
For me there'll be duty or labor;
May the strength which I gather while Day's in the West,
Be spent as for God and my neighbor.

Forest City, Iowa.

No. 2.—Doolittle's Talk on Bees at a Farmer's Institute in New York State.

BY REPORTER.

[Continued from page 133.]

HE next spoke on honey, told how it was of two kinds, comb and extracted. How extracted was different from the "strained" honey of former times, explaining fully all about how extracting was done, and told in a story-like way how his old mother used to strain honey 50 years ago. Then how honey was the purest sweet in the world, most easily digested, etc., and yet, strange to say, hardly one person in three, as nearly as could be ascertained, ever tasted honey.

He next told how those eating honey never stopt to think of the very nice mechanism of the comb, which is so thin that it takes nearly or quite a thousand thicknesses of it to make an inch; how the six sides of one cell formed one side to six other cells, and the three angling bases of each cell form one-third the base to three other cells. Then how the bees, by their antennæ, told in the dark just how to shape their cells, each bee having a rule and a square of its own; how the hexagon form gave the greatest strength with the least waste of space and material, illustrating it with square and round circles, and how the wax was secreted

by the bees consuming honey, the same as the fat of any animal was produced by consuming large quantities of food. How the wax exuded in scales from under the segments on the under side of the abdomen, and how it was taken from there with the feet of the bee and carried to the mouth, illustrating how it was manipulated into comb.

He then told how Huber, the blind bee-keeper of the past, ascertained that it took 20 pounds of honey to produce one pound of wax, and yet with this knowledge, thousands of pounds of wax in comb form was allowed to go to waste in the land, or to be worse than wasted, by breeding hundreds and thousands of the wax-moth to go about to injure the bees of the one who was careful that no bit of comb was allowed to lie about to breed these pests. And yet these wasters thought they knew as much about bee-keeping as anybody, and could not be coaxt to take a bee-paper that their understanding might be enlightened. He said it reminded him of a certain poor church that wanted new hymn-books.

A certain church needed hymn-books badly, but felt too poor to buy them. At last they instructed their clerk to write to certain houses to ascertain the price at which 50 hymn-books could be purchast, and adjourned the meeting two weeks to hear the replies.

When the time came, the clerk read the prices of the different houses, all but one of which wanted $25 for the 50 books, or 50 cents each. But the exception read, that, if the church did not object to a few advertisements being in the hymn-books, the house would furnish them at 5 cents each, or $2.50 for the lot. After due consultation, it was concluded that a few advertisements, as is often seen on the covers of our Sunday-school lesson helps, would do no special harm, so the clerk was authorized to procure the books.

It so happened that Christmas of that year came on Sunday, and the books arrived late Saturday night. The sexton hurriedly distributed them among the pews without taking time to look at them, and the preacher, having his own, or one of the 50-cent books, read the first lines of the hymn beginning,

"Hark, the herald angels sing,
Glory to the new born king"—

explaining that the same would be very appropriate to Christmas morning, when he sat down.

The organist played the prelude, but imagine the surprise and chagrin of that congregation when they found themselves singing—

"Hark, the herald angels sing,
Beecham's pills are just the thing,
Always sure and very mild,
Two for man and one for child."

Here the audience went into uproarious laughter and applause. As soon as a little calm could be restored, Mr. Doolittle said, "And just so with the man who allows wax to go to waste, but is too poor or stingy to take a bee-paper: he really thinks he is singing the praises of God and practical bee-keeping, when he is only singing for Beecham's pills, to the disadvantage of Godliness, himself and his neighbors."

It soon appeared to me that Doolittle had now reacht the part of his theme which he had especially come for. I had wondered that he, only just up from a sick bed, had driven 13 miles over rough roads, and in the cold, to talk to only about 11 persons who were at this time keeping bees, and about 14 others who had at some time in their lives kept bees. How these numbers were ascertained, Mr. D. had taken an expression of the audience soon after he commenced to talk, by asking all who had bees at present to rise, and, when they were seated, askt all who had ever kept bees, but had none now, to rise, which showed the above result, or only about 25 persons out of an audience of nearly 300 or more who had ever been interested in bees to keep a single colony.

As soon as Mr. Doolittle had made the application of his hymn-book story, he continued by asking the farmers if they had ever thought that the bees were the very *best* friends *they* and the *fruit-growers* had? And without waiting for any reply he told them that such was the case, for very much that was raised on a farm could not be raised at all to perfection were it not for the agency performed by the bees and other insects, through their carrying the pollen on their bodies from one flower to another while in search of honey, from such flowers as are not capable of self-fertilization. *None* of the flowers which *secrete nectar* will ever bear fruit to any degree of perfection without the aid of the bees. And yet we find farmers all over the country who are jealous of the bees and their *keeper*, through their ignorance of the prime reason for which they were created and placed upon the earth. Every farmer raising fruit, the clovers, buckwheat, or any member of the vine family, could well afford to pay the keeper of bees a reasonable sum for keeping them, rather than have the bees removed from their locality. Yet they usually growl about and malign their best friends, being jealous of the small compensation the bee-keeper secures from his bees, thinking the same in some mysterious way might have gotten into their pockets, had not the bees carried it off and put it into the pockets of their keeper.

God created the bee for the especial purpose of pollenization of flowers, and so placed nectar in the flowers, which need pollenizing, to attract the bee. And by and through nectar stored in the flowers and gathered by the bees, their wants are supplied, and they caused to live, so that in return they can fertilize more flowers; and so the flowers and the bees are mutual admirers, the one helping the other continuously, thus causing both to thrive and be happy. This was the sole purpose for which bees were created, but as they were like some farmers he knew of, a little greedy, they would store much more of the nectar than they needed to sustain life, when there was a plentiful secretion by the flowers, and through this trait of the bee there was often a surplus stored, or more than the bees needed that they might live. Taking advantage of this trait, man had come to understand how he could have a sweet "suitable for the gods," and thus we had not only honey for the bee-keeper, but ship and train-loads for commerce.

"Can I prove this point?" said Mr. Doolittle. He then went on to show how among the grasses none secreted nectar in this county but the clovers, and proved by the shape of the flowers, how it was impossible for the clovers to be self-pollenizing through the agency of the breeze, as were the others, hence honey or nectar was secreted by each little flowret to attract the bees, that through their agency seed might be perfected. And to clinch the matter he gave history to show how the Australian government had spent thousands of dollars importing bumble-bees from the United States so that they could raise seed from the red clover, which previous to this importation did not give sufficient seed to pay for the harvesting of the crop.

He then took trees of various kinds, and proved the same of them which he had of the grasses, and, as a clincher, told how in a certain township in Massachusetts through jealousy bees were once banisht. The next year no fruit came to perfection in the interior of that township, while around the edges fruit perfected as usual, so that through this the jealous people were led to see wherein they had made a mistake, and begged the bees back again, when they had fruit as before.

[Concluded next week.]

Report of the Northeastern Ohio, Western New York and Northwestern Pennsylvania Convention.

BY ED JOLLEY, SECRETARY.

The Northeastern Ohio, Western New York, and Northwestern Pennsylvania Bee-Keepers' Association held their annual convention at Franklin, Pa., Jan. 11 and 12, 1899. Owing to the prevailing epidemic, "la grippe," and the extremely cold weather, together with the past discouraging season, the attendance was rather slim.

Pres. Geo. Spitler delivered the annual address, in which he exprest his pleasure at meeting those present. Altho he had hoped to see a larger number of bee-keepers present, he thought that these small conventions were usually as enthusiastic and fully as profitable as the larger ones; and that it was those who failed to attend that sustained the loss.

SPRING MANAGEMENT OF BEES

was the first subject on the program for consideration. Mr. Sutton managed by stimulating weak colonies by feeding, and keeping them well packt until all danger of cool nights was past. He never practiced contracting the brood-nest. Mr. Tubbs contracted to the number of combs the bees

could cover, making sure that they had plenty of honey and a good queen, adding empty combs or honey when needed. Mr. Reynolds would feed to stimulate brood-rearing as early as safe. He would feed honey if he had it; if not, he would feed sugar syrup. If the spring was late and cold he would feed artificial pollen and give water.

Some questioned if bees ever needed pollen before natural pollen could be gathered, saying that they believed late fall honey contained pollen sufficient for the needs of the bees in the early spring. The fact that bees will take artificial pollen readily, even greedily, early in the spring, was cited as evidence that bees are often then in need of pollen. Mr. Bair and one or two others had seen their bees gather pollen, or dust resembling it, early in the spring from sawdust-piles.

The question was askt if it paid to feed to stimulate brood-rearing, where there was an abundance of honey in the hive. The majority thought not.

The next question before the convention was that of large or small hives. It was settled as usual, viz.: Some preferred 8, some 9, and some 10 frames. As the old woman said when she kist the cow, "Everybody to their fancy."

Mr. Reynolds' paper, on "The Summer Management of Bees," completed the afternoon session, as follows:

Summer Management of Bees.

Summer management of bees? Why, this is easy enough. If you will give them a wide berth and keep at a safe distance, they will manage themselves. If I am not mistaken, the bee-keeper who sent me the notice, askt me to write on the summer management of bees for dollars and cents. This is what most of us keep—or try to keep—bees for, not merely for our health and the pleasure of coming in contact with the pointed way in which they do business.

We will suppose the bee-keeper has the apiary in No. 1 shape, all colonies ready to be workt as he thinks best—for queen-rearing, section honey, extracting, or the increase of colonies for sale or to keep for his own use. He may fancy rearing queens and bees for sale if the location and surroundings are good. I say this is his line, others would like the producing of comb and extracted honey; this should be their way, but keep this one idea in view.

Produce a No. 1 article if possible, and always sell it for just what it is. We cannot establish a reputation, or a market for the product of our apiary, unless we show our customers that we are to be depended upon, that they will get just what we represent to them. I have found when you gain their confidence it is easy to keep if not betrayed.

Summer management of bees for profit I think must be determined by the bee-keeper himself, for what suits one locality will not answer in another. The same will hold good regarding the season and the bee-keeper himself. Some say that they get just as many pounds of honey as their neighbor, and don't fuss half as much as he does. But a glance at the apiary and honey when ready for market tells for itself who gets the best price from their sales. Let every bee-keeper, after studying the location, the demands of the market, his fancy for the different branches of bee-keeping, choose one or all, and do the best he can. As for the best way to manage bees for profit in summer, I don't know.

But I will give my way when trying for comb honey. Our section of the country is not to be depended upon every year for a good flow, either from clover or buckwheat. I try to have the bees of the right age to gather surplus, if any, and to get them I must figure back from the time I expect the honey-flow. I must count 37 days from egg to the field-worker, and as I cannot get the eggs all laid in one day, I commence feeding to stimulate the bees to feed the queen so she will begin laying six or seven weeks before the honey-flow is expected, if I am to get my bees in shape for the first honey-flow of the season by the queen of each colony laying the eggs.

Sometimes I feed sugar syrup, if I have no unsealed sections left over or brood-combs filled. If the bees have plenty of honey in the brood-combs I will change them, putting combs of honey with the cappings shaved off if necessary between combs of brood. I like this way best, for I have had the least trouble about robbing.

Keep on feeding and changing combs until the honey harvest is at hand. If the bees show signs of swarming, I change a frame of brood with some weak colony for a frame of comb, or put in a frame of foundation.

After the sections are on, if colony we will say No. 1 swarms, put the swarm in a new hive filled with frames of comb or foundation, placing the new swarm on the stand of the parent colony, setting that in some new place. The next morning take the sections off the old hive and place them on the new swarm. This secures most of the field-bees with the old queen, allowing the bees in the old hive to rear a queen for themselves, and to replace any old queen I may have that does not lay eggs enough to build up her colony good and strong.

If I don't want increase of colonies, I put the swarm that comes from hive No. 2 into hive No. 1, that swarmed first, returning the queen of No. 2 where she came from, and so on through the season, and I have only increast one colony of bees. I use mostly what is called T tin supers, or supers holding 24 sections 4¼x4¼x1 15/16 or 1⅞, with no separators; the 8-frame hive, the frame about 17 inches long, and 10½ deep. I use foundation in the sections from ¾ inches wide to whole sheets, always putting the sections containing the narrowest starters in the middle of the super. If the honey-flow seems to be good when the sections are about ready to seal, I raise up the super and put another under it, and continue this as long as the honey-flow lasts.

In the forepart of the season, when it is cool at night, I pack around the supers in the hives with old rags, or quilts made on purpose, paper or burlap sacks, anything to keep them warm, and I have found it pays well for the trouble.

Let us see if we cannot improve in the management of our bees this year, so when the toils of the season of 1899 have been reviewed, and we meet again in 1900 to compare notes, it will not be sorrow and disappointment we report regarding the bees, but words of good cheer and encouragement to all. Let us do our best and leave the rest.

R. D. REYNOLDS.

EVENING SESSION.

This session opened with the discussion of

SUMMER MANAGEMENT OF BEES.

Mr. Sutton managed about the same as Mr. Reynolds. When swarming occurred he managed on the Heddon plan, and depended on the swarm for the surplus. Mr. Peck managed the same for extracted honey as for comb, up to putting on the supers. He used queen-excluders to keep the queen and the pollen below. He would use excluders if he had to pay a dollar apiece for them. By keeping the queen and brood below, he got more honey in the supers, and had more in the brood-chamber in the fall. He workt for both comb and extracted honey, principally extracted. He could produce nearly as much comb as extracted honey, but his market called mostly for extracted. He thought it advisable to run for both comb and extracted honey. Mr. Spitler said if he kept but two colonies he would have an extractor.

FEEDING BEES—OUT-APIARIES OR BEES ON SHARES.

Tapping the question-box brought forth the query, "What is the best method of feeding bees?" The majority used a Mason jar with a cloth tied over it, inverted over the frames. Mr. Sutton took the porcelain lining out of the lid, and puncht a row of holes around the outer edge of the lid from the inside. This workt nicely, and was much handier than tying a cloth over the jar. Mr. Bair fed his bees by brushing the honey or syrup into the empty combs with a painter's brush, and hanging the combs in the hive.

The next question was, "Is it preferable to run an out-apiary, or put the bees out on shares?" It was decided that where the owner had time to work an out-apiary it was best to do so; but where he had more bees than time it might be best to put them out on shares. It was considered a fair arrangement for putting bees out on shares, for the owner to let them out for half the honey and half the swarms, each party paying half the expenses for supplies, the owner to get all his old colonies back at the end of a stipulated time. If any of the old colonies died during this time, it was the owner's loss, but he should get the hives and combs.

Mr. Sutton next gave a talk on increasing our honey resources. In brief his ideas were, to plant and encourage the planting of small fruits, white, sweet and Alsike clovers; and where shade-trees were needed, to plant linden.

The next question was, "In producing comb honey is it best to use separators or not?" The majority thought that it was best. Messrs. Sutton and Reynolds used no separators.

The next query was as to whether any one present had tried the fence separators. No one present except Mr. Tubbs had used them, and he found no advantage in their use.

Next in order was a paper by Mr. B. W. Peck, of Trumbull Co., Ohio, on

How to Improve the Conditions of the Local Honey Market.

It is with considerable hesitation and a feeling that I am tackling one of the labors of Hercules that I attempt to jot down on paper a few thoughts on this important subject.

Of course, it might reasonably be inferred that an experience in producing honey and building up a home country-market for the same, covering a period of 18 years, might well give rise to some ideas on the subject that would be of value to other bee-keepers, yet I feel that there is a great difference between marketing honey and writing articles on the same, and however much or little I may convince you that I know about the former, I am certain that when I am done you will be unanimously of the opinion that the latter is out of my line of business. However, if I should happen to stumble on some point that would excite discussion, I should feel that I have accomplisht the principal object of a paper of this character.

The first and most important point to be considered in building up and keeping a home market is the *quality* of the honey. Under no circumstances do I attempt to sell anything but well-ripened honey. It should also be of the best color possible. Of course, we shall have to dispose of some dark honey, but our customers should have a fair opportunity of sampling it, and it should be sold at a lower price than the whiter goods. I leave as much as possible of the dark honey in the brood-nest, but even then I have two or three thousand pounds of it to dispose of in an ordinary season. I find that my customers prefer it at the lower price, and as they understand exactly what they are getting there is no cause for complaint. In making my fall sales I usually have the amber, white, and dark honey in the same load, which gives customers a fair opportunity of seeing the difference in quality as well as price, and govern themselves accordingly.

In this, as in all matters pertaining to the marketing of honey, absolute honesty is the best policy. One price to all should be the rule. If one for the sake of closing out a load quickly is tempted to cut the price in the hope that his other customers will not know it, he would better resist the temptation, for such information travels very rapidly, and it will not be very long before some one, perhaps several miles distant, will say, "I understand you sold it for such a price to so and so, and I don't want to pay any more than he does."

A reputation for honest and square dealing will also help us to deal with those who are unduly suspicious of adulteration in honey. There are still some ignorant enough to suppose that granulation of honey is positive proof of the presence of sugar or some other foreign substance therein. I label it all "Pure Honey," and on the label are directions as to what to do if it granulates. It is also necessary to supplement this with extensive verbal explanations in many cases, and how much of it is believed depends largely on the amount of confidence placed in the salesman. I have found it profitable in many cases to leave a copy of a honey-leaflet, which explains clearly the subject of granulation, and explodes some of the popular myths in regard to adulteration. But most important of all is to become acquainted with our customers, and to win their confidence that they may be more ready to accept our explanations of these matters.

In regard to the size of the package, I use cases of 12, 20, and 24 pounds each for comb honey, and about uniformly use 25-pound pails for extracted honey.

In working up new territory it is well to have some smaller package, varying from three pounds to 25. With a small package a new customer may be secured who could not be induced to purchase 25 pounds at first; but after the trial trip I usually follow this up with the uniform size—25 pounds. I find it better to break a package occasionally, or weigh out whatever may be wanted, than to carry small packages; for very many take the large packages without objection who would take the smaller ones instead if they had the opportunity; this would make it necessary to cover the same territory too frequently. As I dispose of six or seven thousand pounds in this way in an ordinary season, I find it desirable to sell it in as large packages as possible.

It is not always desirable, however, to sell all that you can to one individual. There are those who can be induced to take two 25-pound pails at the same time. Some people will thereby become so tired of honey that they will not buy any at all the next season, but will tell you that they have some of your last year's sale still on hand. I would rather make a smaller sale and meet a hungry customer the following season. However, the cases in which one is in danger of selling more than can be satisfactorily consumed are comparatively rare.

In regard to prices, this will depend of course largely on local competition. In general I think we should get not less than 12 cents a pound for white comb honey, and 8 cents a pound for white extracted; and generally I have no difficulty in getting these prices.

There is one kind of competition however which I would like to hear discust at this meeting. After long years spent in building up a home market, we are commencing to reap the fruits of our labor, and have secured a long list of regular customers who are looking to us to supply them yearly with honey, when along comes some fresh young competitor, whom you yourself, perhaps in a moment of mistaken benevolence, have started in the business, who, for the purpose of securing your customers, offers it to them at a slightly lower price than you have been receiving. Is this legitimate competition? If not, how is it to be met? Some of the editors of our bee-papers would say, "Get them to subscribe for a good bee-paper;" but I've tried that, and I find that it makes an already unscrupulous competitor a more powerful and effective one. I can't help but believe that if we should induce all the small honey-producers about us to subscribe for bee-papers, it would result in still lower prices. As a question of business policy, can we afford to do it?

I have now, I think, sufficiently indicated some of the conditions of a local market, both favorable and unfavorable. If I have not fully answered the question "how to improve them," I hope I have at least suggested something worthy of your consideration, and that the discussion following may serve to supplement and correct the deficiencies of this paper. B. W. PECK.

Mr. Tubbs thought that it was not best to try to induce our neighbors to go into the bee-business, or subscribe for bee-papers. The majority however thought that there was room for more good bee-keepers—always room at the top—and that every bee-keeper should be a reader of bee-literature.

It was thought that many of those who injure the market do so inadvertently, or from a lack of understanding the conditions of the market; and that this condition might be alleviated if there was more fraternizing among bee-keepers, more visiting back and forth, getting better acquainted with our neighboring bee-keepers, and, through discussion, arrive at a better general understanding of the conditions of the market, and how to meet them.

SECOND DAY—MORNING SESSION.

"Profitable use of comb foundation." Messrs. Tubbs, Sutton and Reynolds used starters in the sections. Objected to full sheets on account of "fishbone." All present used full sheets in the brood-frames, except Mr. Silzli, who used starters in both sections and brood-frames.

"Preparing bees for winter." The first preparation was to see that they had a good queen in the fall and plenty of good honey. Nearly all present practiced out-door wintering. Nearly all used double-wall or chaff hives. Chaff, straw or forest leaves was the packing generally used. Mr. Silzli used paper with excellent results.

"How to prevent robbing." Leave no honey exposed during a dearth of honey, and keep good queens in your colonies. Mr. Sutton said he believed that robbing never occurred in a colony that had a first-class queen.

"Making the Association more useful." Mr. Spitler thought that our meetings were very good, but if a larger attendance could be secured greater good to a greater number would result. He thought it would be advisable for the Association to offer some premium—a bee-paper he thought would be a very good and appropriate premium to offer as an inducement to attend the conventions.

The following officers were elected for the coming year: President, Geo. Spitler, of Pennsylvania; Vice-President, B. W. Peck, of Ohio; Secretary and Treasurer, Ed Jolley, of Franklin, Pa.

Andover, Ohio, was chosen as the next place of meeting.

AFTERNOON SESSION.

Mr. Sutton exhibited his new extension swarming-pole. This pole was made to use an ordinary swarming-box, or any other swarming device. By means of a cord within the pole, its length could be instantly extended from 12 to 22 feet, or any intermediate length desired.

It was originally designed to have some bee-keeper of long experience give a sort of reminiscence. In the absence of such a paper it was decided to hold a regular old

Methodist experience-meeting, except that our experiences should be about bees and things kindred. This was really one of the most enjoyable features of the convention—one in which all took part. Had any of the uninitiated been in the corner listening, they might have thought, "What great fishermen those fellows would have made!" It would be superfluous to attempt to give each one's experience here in detail, nevertheless these experiences were thoroughly enjoyed by all present. But I cannot refrain from giving a part of what Mr. Bair said.

Mr. Bair is a veteran—a veteran soldier and a veteran bee-keeper. After giving some of his more common-place experiences, he told us some of the curious superstitious ideas in vogue when he commenced bee-keeping. "In those days," he said, "when a swarm of bees came out, and you had not the necessary things at hand to make sufficient noise, if you ran into the kitchen and took a loaf of bread, turned it upside down on the table, and plunged a knife down through the loaf into the table, the swarm could not possibly go away, but was sure to settle. If you had everything ready, and the family all at home, a loud noise was all that was necessary to cause them to settle. If, perchance, they had started to leave before you discovered them, if you could run ahead of them and turn your hat upside down on the ground the swarm could not possibly pass over it. If you succeeded in getting them hived, if you would go to the pig-sty and get some dirt and put it on top of the 'skap,' it would be impossible for the bees to leave. If a member of your family died it was necessary to go and tell the sad news to the bees, or else you would never have any more luck with them."

A number of other experiences were fully as ludicrous and enjoyable.

The convention adjourned to meet at Andover, Ohio, Jan. 12 and 13, 1900. ED JOLLEY, *Sec.*

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Moving Bees the Middle of February.

I have my bees in the cellar (Feb. 14), but as I have moved about eight miles from them I would like to move them, as the man that lives in my house doesn't know anything about bees. If I move them now I can use a sleigh. Will it be all right if I move them and give them a flight before putting them into the cellar here? I would like to have them here, but I don't want to do anything that will harm them. I have only 11 colonies; they are hybrids and golden Italians. WISCONSIN.

ANSWER.—So near spring as this there would be little risk in hauling them and putting them directly into the cellar, as they will not likely be confined there very long at farthest. But it may be still better to wait a little later, and set them directly on the summer stands.

What to Do with a Queenless Colony.

One of my colonies, a swarm of last summer, did not do well, while the other colonies stored from one to three supers each full of honey. This one colony filled the lower box all right, but did not do anything in the super, and showed a forlorn appearance during fall. I believe the colony is queenless, but my perception came too late—I had my bees in the cellar before I knew the probable cause of inactivity. I dare not examine the colony while in the cellar, but as soon as I can put them out, I shall examine it and find whether it is queenless. My question is: Would it be advisable to introduce a new queen if queenless? and when would be the proper time to do it? IOWA.

ANSWER.—If you have only lately commenced keeping bees, the advice to give you is to give the bees a queen as soon as you can get one for them in the spring. Not that such advice is at all good; but it's the only advice you'll follow. If, however, you've kept bees long enough to be a little toughened, then my advice is not to think of giving them a queen. It's a little doubtful if you'll have a chance anyhow, for a queenless colony put in the cellar doesn't generally come out alive, and if it does the bees are likely to be so old that it will only be an aggravation to give them a queen, for they will be rapidly dying off and will make very slow work building up to a colony that's worth anything. The wise thing will be to unite them with a weak colony, or divide them among several. Do this as early as the weather is warm enough for bees to fly freely.

What About Catalpa for Bees?

Do you know anything about the catalpa tree for honey? I have about 60 of them, and they were loaded with blossoms and bees last spring. MENDOTA.

ANSWER.—I don't know. My impression has been that they are not of much value, and yet the fact that bees are plenty on them is pretty strong evidence that they are of value. Even if the bees get only a little nectar from them, or if they get only pollen, it's just that much more than they'd otherwise get, for the bees wouldn't work on them if they could do better elsewhere.

Closed-End vs. Open-End Frames—Foundation Fasteners for Sections.

I am situated so that my bees have abundant pasturage on willow early in the spring, followed by dandelion, April flowers and other wild flowers. Large fields of wild mustard are in full bloom by June 1, but bees do not gather any surplus honey from it. By the last of June wild clover is in full bloom which yields our main flow of honey.

1. Under these circumstances, do you think that the closed-end frame hive would induce bees to breed up faster in the spring than in the ordinary Hoffman frame, so as to be in full force to work on clover to the best advantage, and probably gather some mustard honey?

2. Which foundation fastener for sections do you recommend?

3. What is your opinion of the A. C. Miller fastener? OSAKIS.

ANSWERS.—1. With the ends entirely closed, the bees are warmer for winter and warmer for breeding up in spring, but the advantage is more than counterbalanced by the inconvenience in handling, unless I am mistaken, and I don't believe there would be enough difference made to allow a harvest from flowers earlier than open-end frames would allow. But where propolis is scarce there is not the same objection to closed-end frames, and with propolis as plenty as it is with me, Hoffman frames are by no means desirable.

2. I've never tried anything that does better than the Daisy fastener.

3. It doesn't work as well for me as the Daisy.

A Bunch of Ten Questions.

1. What kind of bees are the yellow-banded Adel bees? Are they good honey-gatherers?

2. Will bees finish queen-cell cups when they have a fertile queen?

3. I have some partly-filled sections where honey is partly candied. Is there any use I can make of them, or will the bees clean out the candied honey if I put them in supers on the hives next spring?

4. Are tin supers better than others? and do sections come out of tin supers cleaner than wooden ones?

5. Is it well to divide when bees swarm and return to their hive when they have a clipt queen?

6. Will capt queen-cells hatch out in an incubator?

7. I have some moldy frames of honey which I kept over winter. Will it do any harm to give them to the bees next spring?

8. About how many eggs does a young queen lay?

9. To-day it was warm, and my bees wanted to fly, but the ground was covered with snow, so I put on the entrance of the hive some wire-netting. Was that all right?

10. How close, or how much, do you cut the queen's wings? NEW JERSEY.

ANSWERS.—1. I never saw any of them. If I am not mistaken, it is a strain of Italian bees to which that name

is given, just as you might take a colony of Italian bees and give them a particular name.

2. That depends. If you look into almost any hive containing a colony, you will find a number of queen-cell cups that will remain unfinisht until the bees think of swarming, when they will be occupied and finisht. They will not be occupied and finisht unless a fertile queen is present, for if the queen is taken away, instead of rearing a queen in one of these cups, a larva in a worker-cell will be chosen.

3. If the least bit of honey has candied, it is doubtful that you can get them cleaned out so they will be good to use again.

4. I never before heard of "tin" supers, and I doubt whether such are in use. It is probable you have reference to T tin supers, or, as they are generally called, T supers. The only tin about them is the bottom supports on which the sections rest, and these are called T tins because a cross-section looks like the letter T inverted—⊥.

5. The common practice is to set the old hive to one side, let the swarm return to a new hive placed on the old stand, and let the queen go in the new hive.

6. Yes, a sealed queen-cell will hatch out a queen if kept anywhere warm enough.

7. That's the best thing to do with them, only you mustn't give one colony so many at a time as to discourage it. You may give to a colony as many as two or three at a time outside of its brood-nest.

8. She lays one at a time. When she first begins to lay she will lay very few in a day, but when she gets fairly warmed up to the work—say when the white honey harvest is about at hand—she will not think it a very big thing to lay 2,000 or 3,000 every 24 hours.

9. You might have done better. That left the light shining in and the warmed air coming in, urging the bees in the strongest way to come out for a play-spell, and the fact that they are fastened in seems to make them all the more fierce to get out, so that it is quite possible more bees die in the hive than would die on the snow. The better way would have been to put boards or something of the kind in front of the hive so not a ray of light could enter.

10. A queen has four wings, two on each side. Cut the two on one side as short as you conveniently can.

Number of Colonies to a Load.

How many colonies do you commonly put on a wagon at a time? ILLINOIS.

ANSWER.—Generally I put on all the wagon holds—31 colonies. Nine of these go in the body of the wagon under the rack, the other 22 on the rack.

Bees Flying Early—Robbing—Clover—Best Size of Hives, Etc.

1. Is it early to have young bees in the hive? I had some that took a flight Jan. 15.

2. I have a strong colony that is queenless. Will they rear a queen now if I give them some brood, before natural pollen comes in?

3. I have some bees that want to rob. It seemed that they got a start at a queenless hive, and I put them into the cellar, yet there seemed to be quite a number working around all the hives. What shall I do? Do all bees rob to some extent during warm days in winter?

4. What kind of clover would you recommend for this State (Tennessee), sweet or Alsike? We have red clover, but it doesn't yield nectar as well.

5. What kind or size of hive is best for comb honey—10-frame or 8-frame? I use the standard Langstroth 10-frame.

6. Will bees store honey enough in an 8-frame hive to winter on? TENNESSEE.

ANSWERS.—1. Generally no brood will be found as early as Jan. 15, altho it is quite common to find breeding commence in February when bees are wintered out-doors. If the bees that flew Jan. 15 had just emerged from their cells, that was remarkably early. It is possible they had emerged so late in the fall that they still appeared young.

2. They might, but it would not be very successful, and the wisest thing you can do is to unite them with a weak colony that has a good queen.

3. You can't get bees so honest that they'll never rob if the temptation is great enough, and you can't do anything with the robbers to stop them. The only thing is to keep everything as safe from them as you can, not exposing honey and not keeping weak and queenless colonies.

4. Sweet and Alsike ought both to do well with you. Unless your stock has learned to eat sweet clover, you may find Alsike the more profitable for forage. Likely an acre of sweet clover will yield more honey than Alsike, but you must consider its other value as well as its value for honey.

5. It depends much on the management. Unless a good deal of attention is paid to them, 10-frames are better.

6. Sometimes, and sometimes not. If the combs are kept filled with brood until pretty late, there is hardly room enough for honey. If left to themselves there is more danger of suffering for want of stores in 8-frame than 10-frame hives.

Getting Bees to Empty Partially-Filled Sections.

On page 98, near the beginning of the page, I see a way given to get honey emptied out of sections. Now what I want to know is this: If I put on a hive a super of sections partly finisht, and then put over that another super having sections with a little honey in them, will the bees carry down the honey out of the upper super? SUBSCRIBER.

ANSWER.—So far as I have tried anything of the kind—and I have tried it extensively—it has been an utter failure.

Using a Bee-Escape—How Much Comb Foundation—Transferring from a Tree.

1. Can I use a bee-escape on an improved Langstroth-Simplicity hive without a super? or will I have to use supers? If so, would it be well in this part of the State to use double supers?

2. How much comb foundation do I require through the summer for two hives? and which is the better, the extra thin surplus or the thin surplus, if I use a one or two inch starter in an 8-frame hive for comb honey?

3. How can I transfer a swarm of bees from a tree in the woods? Will I have to cut the tree off so short that I can carry the trunk home, or can I take a hive along to the tree and transfer them there? What is the best way to do this, and what time of the year?

4. Which bee-book do you consider the better for a beginner, the "A B C of Bee-Culture" or Prof. Cook's "Manual of the Apiary." MINNESOTA.

ANSWERS.—1. I'm not entirely sure whether I understand your question. There's hardly any need of a bee-escape unless you have something in the line of a super, understanding, of course, that by a super is meant anything that is put *over* the hive in which to have surplus honey stored. It may be a super to contain sections, or it may be a super to contain extracting-combs. In either case an escape can be used. If by "double super" you mean two supers on a hive at a time, it is generally advisable to have more than one super on at a time if there is a good honey-yield and the first super is pretty well advanced. If I haven't struck the right idea, ask further and I'll try again.

2. I don't know which is better, altho I have generally used the thin. When not storing, the bees are likely to gnaw the extra-thin more than is desirable. To be sure, supers should not generally be left on the hive when bees are not storing, but one wants them on a little before storing begins, and sometimes there is a temporary lull when the bees stop storing for a very short time and then begin again. One pound of foundation will probably do for what you require.

3. Either way will answer; whichever is most convenient for you, taking all things into consideration.

4. Probably no bee-book in the world is fuller of practical information than the "ABC of Bee-Culture." "Cook's Manual" contains information that is lacking in the "ABC of Bee-Culture" as to the natural history of the bee from the stand-point of an entomologist, as well as giving practical information. I wouldn't like to spare either of them, nor would I like to be without Dadant's Langstroth.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Dot Contest Prizes we expect to close up in the next issue of the Bee Journal. Judging from the number of responses we have received to our suggestion that the cash winners donate their prizes to the Langstroth Monument Fund, we think that about half of them have done so. This should make an addition to that Fund of about $50. But next week we will know exactly, and we will also remit to the balance of the winners the several amounts due them. We would have done this before now, but we have all been so busy in the office that we could not well reach it. And then, we wanted to give *all* the winners a good chance to contribute to the Monument Fund.

Philadelphia, Sept. 5, 6 and 7.—The following notice is sent us by Dr. A. B. Mason, the Secretary of the United States Bee-Keepers' Association, which we are glad to give a place in these columns:

TOLEDO, OHIO, Feb. 27, 1899.

The Executive Committee of the United States Bee-Keepers' Association has complied with the request of the members as exprest at the Omaha convention, and decided to hold the next convention of the Association at Philadelphia, Pa., commencing Tuesday evening, Sept. 5, holding three sessions on Wednesday, and three on Thursday, the last being on Thursday evening.

The program is being prepared, and arrangements are being made for the entertainment of those in attendance on the meetings. Notice of exact place of meeting, railroad and other arrangements, will be given in due time.

The Philadelphia Bee-Keepers' Association, with only one exception I believe, is composed of amateurs, who are keeping bees for pleasure, and not profit in dollars and cents, and its members are showing quite an amount of interest in the coming convention; and in a recent letter from its Secretary, in speaking of securing rates, and places for delegates, he says: "I can assure you that we will do everything we undertake to do in a thorough manner." So we shall have a cordial reception, and an interest taken in our comfort. A. B. MASON, *Sec.*

We hope that just as many of our readers as possible will begin to make their arrangements to be present at the National Convention in September—during the Grand Army meeting, when railroad rates will be low.

Some Wisconsin Statistics for 1898.—We are informed that the apiarian output among manufacturers in Wisconsin during 1898 was as follows: 30,000,000 sections; 100,000 hives; and 30,000 pounds of beeswax made into comb foundation. These figures do not include the supplies handled by dealers, simply manufacturers. Of course Wisconsin stands at the head in the output of sections and hives; and likely Ohio would come next.

Bee-Keeping as a Sole Business.—The Question-Box of this journal lately discust whether it is safe to depend upon bee-keeping alone for a livelihood. Editor Hutchinson quotes approvingly the answer of C. P. Dadant, "Yes, provided you do not keep less than 300 to 500 colonies," and says if a man keeps only enough bees to make a living in a good season, a bad season will oblige him to add some other business. He thinks the best thing to add is *some more bee-keeping*.

The Michigan Foul Brood Bill.—Hon. Geo. E. Hilton, President of the Michigan Bee-Keepers' Association, has sent us a copy of the proposed Foul Brood Bill now before the State legislature, with the request that we give it space in the Bee Journal. It reads as follows:

SEC. 1.—The people of the State of Michigan enact that upon the recommendation of a majority vote of the members of the Michigan State Bee-Keepers' Association, the governor shall appoint for a term of two years a State inspector of apiaries, who shall, if required, produce a certificate from the governor that he has been so appointed.

DUTIES.

SEC. 2.—The inspector shall, when notified, examine all reported apiaries, and all others in the same locality not reported, and ascertain whether or not the disease known as foul brood exists in such apiaries; and if satisfied of the existence of foul brood, he shall give the owners or caretakers of the diseased apiaries full instructions how to treat said cases, as in the inspector's judgment seems best.

DESTRUCTION OF BEES.

SEC. 3.—The inspector, who shall be the sole judge, shall visit all diseased apiaries a second time, and, if need be, burn all colonies of bees and combs that he may find not cured of foul brood.

VIOLATIONS.

SEC. 4.—If the owner of a diseased apiary, honey or appliances shall sell, barter or give away, any bees, honey or appliances, or expose other bees to the danger of the disease, or refuse to allow said inspector to inspect such apiary, honey or appliances, said owner shall, on conviction before a justice of the peace, be liable to a fine of not less than fifty dollars, or more than one hundred, or not less than one month's imprisonment in the county jail, nor more than two months' imprisonment.

ANNUAL REPORT.

SEC. 5.—The inspector of apiaries shall make an annual report to the governor of Michigan, giving the number of apiaries visited, the number of diseased apiaries found, and number of colonies treated; also the number of colonies destroyed by fire, and his expenses.

EXPENSES.

SEC. 6.—There is hereby appropriated out of any moneys in the State treasury, not otherwise appropriated, a sum not exceeding five hundred dollars per year, for the suppression of foul brood among bees in Michigan. Said in-

spector shall receive four dollars per day and traveling expenses for the actual time served, which sum shall not exceed the moneys hereby appropriated, to be paid by the State Treasurer upon warrants drawn and approved by the Governor.

SEC. 7.—This Act shall take effect and be in force from and after its passage and publication.

SEC. 8.—By this Act all previous legislation on the subject of foul brood on the statutes of Michigan is hereby repealed.

Mr. Hilton also desired us to again urge all bee-keepers in Michigan to write at once to their senators and representatives at Lansing, urging them to favor the passage of the Foul Brood Bill as above.

DR. C. C. MILLER was in Chicago last week attending the third quarterly meeting of the Chicago Bee-Keepers' Association. It is just wonderful how young he keeps. He is 67, and Dr. Peiro, when so told, said, "Why, he doesn't look a bit over 50." But may be it's a habit doctors have—of looking young. Now, Dr. Peiro is 59, and he doesn't look much over—well, 45. Of course doctors *ought* to know how to keep looking young while they help to make the rest of us look old!

* * * * *

REDBUG NOT BEDBUG.—Mr. O. O. Poppleton, of Dade Co., Fla., wrote us Feb. 28:

FRIEND YORK:—On page 115 of your issue for Feb. 23, first column and last paragraph, the word "bedbug" is printed for "redbug." Please correct the mistake, as the balance of the paragraph reads rather funny as it is.

Bees are doing the poorest in building up this winter I have ever known them to do here. The reason is because the extensive fires last spring destroyed our winter pasturage. O. O. POPPLETON.

* * * * *

DR. C. A. DAVID is one of Chicago's eminent medical specialists. He was born in 1845, in Richland Co., Ill., and came to Chicago in 1875, when he decided to devote himself exclusively to one class of diseases that of the rectum—such as the treatment of piles, fistula, irritable ulcers, strictures and the like. He then took a thorough course at the University of New York, graduating therefrom in 1882. Dr. David has superseded the old methods of torture with a more rational treatment, and, as a consequence, success has attended his efforts, and by the profession at large he is recognized as an authority. His success may best be summarized by the simple statement that of the vast number of treatments which he has given, aggregating nearly 100,000, he has never lost a case.

We have recently had occasion to patronize Dr. David, and are glad to recommend him to all who require the kind of service he can so successfully and satisfactorily perform. His office is in the Champlain Building, northwest corner of Madison and State streets, Chicago. To our mind he exemplifies to the fullest degree the highest ideal of the Christian physician.

* * * * *

MR. FRANK MCNAY, of Wisconsin, who with his wife, has been spending the winter in California, wrote us as follows from San Francisco, Feb. 20:

FRIEND YORK:—California seems to be doomed to another year of severe drouth, as there has been no rain for several weeks, and only about an aggregate of three inches in most locations in Southern California, and but little more up here. Bee-keepers are fast losing hopes of a sufficient amount of rain to secure any honey, and bees are being shipt to Arizona and Utah.

The very small amount of rain and exceptionally fine warm weather have afforded us an excellent winter for touring. Mr. J. H. Martin (Rambler) was our near neighbor while in Los Angeles, and on our Rambler wheels we enjoyed many long rambles to the country and mountains with "Rambler" as our guide.

Before leaving Los Angeles we enjoyed an ocean voyage to San Diego and return. I also had a very pleasant visit with Mr. Harbison, and a drive of 25 miles out to his large apiary, which is an ideal location on his 700-acre ranch in a mountain canyon.

I also took a ride by wheel over the Mexican border, returning by way of Coronado Beach and the famous hotel.

We have now spent a week looking over San Francisco, Oakland, the Golden Gate Park, Sutro Heights, and the Beach, and I took a wheel-ride to San Jose, 45 miles down the Bay, through a fine farming and fruit valley. But we do not enjoy this part of the State as well as Los Angeles and vicinity, and we will soon leave the coast, as we wish to spend a few weeks in Salt Lake City and Denver before returning home. FRANK MCNAY.

We are glad our friends have enjoyed themselves so much in California. Some day we hope to be able to follow their example, and ramble around awhile in winter in a warmer clime.

* * * * *

DR. PEIRO, when on his trip West last fall, also visited the States of Oregon and Washington. He has this to say about them:

I have given much thought regarding the matter of migration to either of the above States since a personal observation of the several encouragements each offer, particularly in an agricultural and horticultural sense, and conclude that to the young man of brains and brawn anxious to "get on in the world" a well-selected piece of land for a farm home in either of these States is preferable to the drier altitudes of Arizona, California, or even Idaho. Much moisture can be depended upon to insure regular crops, and the market for any produce is fully as favorable.

Because of the plentiful and natural irrigation, fruits are abundant, small grain yields fine average crops, and hay (alfalfa, especially) is always and bountifully to be depended on. Hence to the young, or even middle-aged, blest with health and a willingness to work, I suggest they investigate the possibilities of these comparatively new but fast-growing States. From a climatic point of view I should deter the weak, consumptive or inflammatory rheumatic patient from going there. DR. PEIRO.

* * * * *

THE UNION COMBINATION SELF-FEED RIP AND CROSS-CUT SAW, while it is designed for wood-workers generally, is especially valuable for making bee-hives, frames, etc. This machine and attachments are suitable for ripping, cross-cutting, mitering, rabbeting, grooving, graining, dadoing, boring, scroll sawing, edge moulding, beading, etc., thoroughly practical in every particular, and easy to operate. It has a large combination wood and iron table, 28x36 inches, with extension rolls, four changes of speed and three changes of feed. It has babbitt metal lined boxes which are adjustable to take up the wear; has steel shafts and machine cut gears; has foot power with a walking motion, and a chain belt attachment for fast speed. A complete illustrated catalog fully describing this machine and attachments, also a full line of wood-working machinery, will be sent on application. Send for catalog "A." Address the manufacturers—The Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N. Y., and say you saw their advertisement in the American Bee Journal.

* * * * *

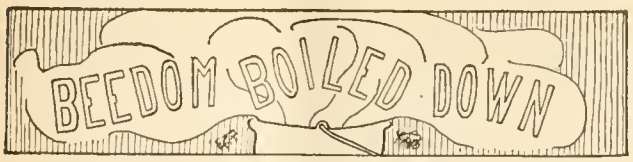
EDITOR HUTCHINSON, of the Bee-Keepers' Review, had this to say in his February number:

"The American Bee Journal began the year with a new dress of type and a number of little nicknacks that add to the beauty of its personal appearance. By the way, this journal recently printed 15,000 copies; the extra copies to be used as samples. This is probably the largest single issue of any bee-journal that has ever been printed in this country."

Many thanks, Mr. Hutchinson. But the number we printed in that large edition was 16,000. You mist it by only 1,000.

* * * * *

I. J. STRINGHAM, 105 Park Place, New York, N. Y., has sent us his catalog of bee-keepers' supplies for 1899. He is one of our regular advertisers, and will be glad to mail his catalog to all who will write him for it. Please mention the American Bee Journal should you write Mr. Stringham or any others of our advertisers.



Long Heating Darkens Wax, as also does frequent reheating, altho slow cooling allows the impurities to settle to the bottom, says Editor Root.

Smoking Bees When Taking from the Cellar is recommended by C. Davenport, in the Bee-Keepers' Review. It helps to keep the bees from mixing up and going into the wrong hives, and no harm comes from the smoking. An acquaintance of his prefers a windy day for taking out, as bees fly closer to their hives, thus mixing less.

Moths will not Trouble Dry Combs, if such combs are entirely free of honey, pollen, or cocoons. J. B. Hall told the editor of the Bee-Keepers' Review that an excluder keeps the queen out of extracting-combs, the bees lick them clean at the close of the season, then there is no trouble from worms, even if the combs are stackt up in hives outdoors and the hives left open to the moths.

Do Bees Freeze?—Dr. Miller discusses the question in the Progressive Bee-Keeper, and says that while it is true that bees enough in a cluster, with air and food enough and cleansing flights enough, are in no danger of freezing, yet with some of these conditions lacking they may freeze in a temperature not so very low; and that when the unqualified statement is made, "Bees never freeze; they starve," the answer should be, "Bees do freeze, millions of them."

Does Black Anger Bees?—J. H. Martin thinks color does not make so much difference as texture and cleanness. Fuzziness is more than color, a fuzzy hat, white or black, attracting attention, and a hole in such a hat being a special target.—Bee-Keepers' Review. Those who say they have seen bees make a distinction on account of color may be hard to satisfy that there is no such thing by the testimony of those who have never observed it.

American Hives Larger than German.—In Germany, bee-keepers in general don't know what a large hive is. Only lately I was reading how a German bee-journal made fun of the French for using the large Dadant hives, and when a large yield is reported from such hives they call it pure humbug....I may further say that here in America entrances are very much larger than in Germany, and the bees seem to prosper with them.—L. v. Stachelhausen, in Deutsche ill. Bztg.

A Point in Favor of Small Hives, and a strong point in his estimation, is given by the editor of the Bee-Keepers' Review. If the bees get started with more honey in the brood-nest than brood, or even half as much honey as brood, the *habit* of storing in the brood-apartment has become so strong that they will not give it up. He especially values the practice of giving at the opening of the harvest a super of drawn combs, thereby inducing the bees to *begin* their storing in the super.

Nailed Sections Preferred.—Says G. M. Doolittle in the Progressive Bee-Keeper:

"I consider that nailed sections are enough better for shipping honey, to more than pay for the extra time spent in nailing them, for the loss by breakage with other than nailed sections rules so much greater than with the nailed that the damage through breakage will more than hire the sections nailed, or pay the bee-keeper for his time when nailing them himself."

A New Separator is described by Jacob Alpaugh, in the Bee-Keepers' Review. The separators are supported in the super by a strip of tin at each end of the super, the same as in a T super, but instead of a T tin the sections are supported by strips of tin fastened to the separators. These pieces of tin are 1½ inches long and ½ inch wide, ¼ inch at the bottom being turned at right angles to support the corner of the section. Some one got up something of that kind before. Was it L. A. Aspinwall?

Bees Needed for Fruit.—Press Bulletin No. 8, of the Kansas Experiment Station, says:

"If bees are kept from fruit-blossoms by netting or other artificial means, the amount of fruit set is little or none. It not infrequently happens that inclement weather prevents or hinders the flying of bees during the period when the flowers are receptive. A fruit-tree, half of which was subjected to a continuous spray of water during the flowering period, produced no fruit upon the sprayed portion, but an abundance upon the other. A failure due to the above-mentioned cause cannot well be prevented, but may be modified by having bees near at hand to utilize the short favorable periods which do occur.

"An insufficient supply of bees will hinder the setting of fruit. While other insects may take part in the carrying of pollen, the fruit-raiser must rely chiefly upon honey-bees. Experience shows that, tho hungry bees may fly two or three miles, hives should be within half a mile of the orchard or small-fruit patch."

Boiling Foul-Broody Honey is discust by the Bee-Keepers' Review without reaching any positive conclusion as to how long boiling is required. If the work of the scientists is to be counted, Editor Hutchinson thinks Dr. Miller may be justified in demanding 2½ hours. But he seems to think we can't count too much upon what the scientists find out, and cites, among other things, that Cheshire reported foul brood spores in the eggs of a queen, while a queen from an infected colony has never carried the disease to another colony. That leaves the possible inference that Cheshire was mistaken as to finding spores in eggs. After Mr. Hutchinson had written this, he made a visit to Guelph, Ontario, had an interview with Prof. Harrison, the bacteriologist, and saw some things through a microscope. Instead of knocking into pi what he had written, with admirable frankness he lets it stand, and adds that through that microscope *he saw with his own eyes spores in an egg.* Perhaps it is well for all to avoid being too positive, no matter which side we are on.

Baits in Supers Help to Prevent Swarming.—A Stray Straw in Gleanings says: "If L. Stachelhausen is correct, as I think he is, as to the effect of baits in supers, page 85, then they form quite a factor in prevention of swarming. Forcing bees to begin on raw foundation in the super by the crowded condition of the brood-nest is forcing them just so much toward swarming. [This is a good point. It is one of the golden nuggets that appear in the ordinary articles of some of our contributors, but which the editor had not seen. I now desire to give it all the prominence I can, as I believe there is a good deal in it.—ED.]

Winter Protection.—D. W. Heise—the man that notes and picks for the Canadian Bee Journal—is getting ready for himself a whole lot of trouble. He has so little respect for generally accepted opinions that he says if the cluster of bees is properly protected on top and sides, he would rather have his hives out in the open plain than surrounded by evergreen hedges or high board fences. When too much protection is given by buildings, fences, etc., the bees venture out when too cool for their safety, while the bees in the open mind their business and stay at home.

Liquefying Extracted Honey Before Selling is a mistake in the opinion of D. W. Heise. Instead of taking that trouble, he sells his honey in whatever condition it happens to be, taking pains to instruct his customers what they must do to liquefy it, and finds his advantage in doing so.—Canadian Bee Journal.

Heise's head is level. No matter what pains you take in liquefying, the honey will granulate in your customers' hands, and if they do not know how to liquefy it, your trade will suffer. You may as well instruct them properly in the first place.

When Should Bees be Taken from Cellar?—C. Davenport thinks if bees winter well and are nearly dormant they should be left till settled weather; but if restless and uneasy, many leaving their hives and dying, the sooner they are set out the better. If in an intermediate condition, it matters not whether they are taken out in March or April. More stores are consumed if the bees come out early, but they will be stronger for the harvest if early weather is good. If the weather is bad, then those left in the cellar are better off.—Bee-Keepers' Review.

Root's Column

This is a Queer World. We cannot be made to see all things alike. Some like one thing, and some another. There is a class, no doubt, who hesitate to try Plain Sections because of the extra expense of the fixtures. There is another class who would not have them anyhow. Well, we are prepared to suit everybody. We have just brought out a slat separator to take the place of the ordinary tin or solid-wood separator.

They are simply four slats bound together at the ends by folded tins. They can be used in any super taking the old-style sections; and their cost is hardly any more than wood separators. We can supply them for 80 cents per 100, either for T supers or for section-holders. For odd-sized supers, of course we shall have to make additional charge. They can be supplied with our regular S super—that is, the supers with old-style sections and section-holders, or with our regular T supers.

Mr. J. E. Crane produced several thousand pounds of honey with separators of this kind, and he is of the opinion that the freer communication afforded gave him fuller and better boxes; but the boxes were hardly as complete and nice as those from fences.

Keep Your Eye on this Column,

as we may be able to save you dollars.

The A. I. Root Company
MEDINA, OHIO.

General Items

Prospects Good for Honey.

According to present indications Southern Indiana, and especially Vanderburgh county, will have a good honey-yield for the season of 1899. We have had the largest rainfall for quite a number of years. A heavy snow falling just immediately before the recent cold wave, when the mercury reacht 15 degrees below, saved the most of our young honey-plants from freezing out. I examined and found the roots of the dry weather honey-vine to have withstood the cold weather nicely, thus insuring a bountiful supply of rarest nectar from this source, should the summer be hot enough. However, clover does not look so well, altho it is somewhat early in the season. Large losses of bees are reported all around.

J. C. WALLENMEYER.

Vanderburgh Co., Ind., Feb. 23.

Bees Had Good Flight.

Bees had a good flight Feb. 21. My 34 colonies all seem to be in fair condition. I have thus far lost none.

JOHN STROEBEL, JR.

Saginaw Co., Mich., Feb. 27.

Don't Depend on Neighbors.

I have four colonies of bees. I bought one colony in 1896, and that year they did not get a pound of honey; they would have starved if we had not fed them. The year 1897 we got about 100 pounds, mostly from sweet clover, but some heart's ease. The year 1898 we got 275 pounds. My husband was discouraged; he could not work with the bees, as his work kept him so busy that he had no time to spare. We sent for our neighbor every time there was anything to be done with the bees, so last year I told my husband to send for a veil and smoker, and I would help take care of them myself. This thing of depending on someone else is all nonsense.

We just packt our bees and left them on the summer stands. It is very cold at present—five degrees below zero.

RENA LAFORGE.

Cowley Co., Kans., Feb. 6.

Bees Working Hard.

I have 115 colonies of bees in good shape, and the prospect are for a good year. We are having fine weather. Pussy willows are in bloom, and bees are working hard.

Kings Co., Cal., Jan. 8. B. P. SHIRK.

Doolittle's Funnel for Making Nuclei

What is the size of the bee-funnel recommended by Mr. Doolittle to shake bees into, when making nuclei? What I want are top and bottom dimensions.

J. N. LADENBURGER.

[We referred the above question to Mr. Doolittle, who answers as follows:—ED.]

ANSWER.—I think that the funnels used by the A. I. Root Co., and others, in putting up bees by the pound, were an oblong at the top, the sides being perpendicular till coming near the bottom, when a gradual slant was made till the outlet to the funnel was reacht, which outlet should be not less than 2½ inches in diameter, in any funnel made for this purpose. If smaller than this, the bees will clog in this narrow part, when a full frame of them are shaken in at once, a thing which we nearly always want to do.

But I had *my* funnel made the same as an ordinary funnel is made, the top of which was 16 inches in diameter, the sides gradually sloping, at about the angle used in the

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To get new customers to test my seeds I will mail my handsome **catalogue for 1899**, lithographed and beautifully illustrated, and a **10c. Due Bill**, good for 10c. worth of seeds for trial, **absolutely free.** It is full of bargains. All the **Best Seeds, Bulbs, Plants, Roses, new Fruits, Farm Seeds, Potatoes, etc.**, at lowest prices. **Ten Great Novelties** offered without names. I will pay **$50. FOR A NAME** for each. Don't buy your stock until you see this new catalogue. Several varieties shown in colors. Great inducements for orders this year. **You will be surprised** at my bargain offers. Send your address on Postal to-day. Tell your friends to send too. Old customers will receive a copy.

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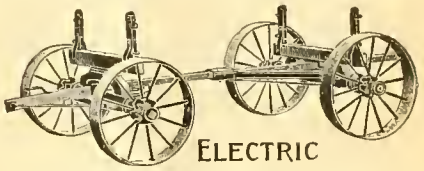

which is neater, stronger, and in every way better than wood. Well painted in red and varnisht. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co. Box 16, Quincy, Illinois, for their new catalog, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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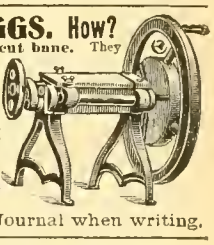

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is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best.
THE DEMING CO. Salem, O.
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ordinary small funnel, till they reacht the outlet, which was 2½ inches long by 2½ inches in diameter. After it was made I bent the sides in at two opposite points till the top was of an oval shape about 19 inches across the long way by one foot the short way. And this is the only funnel I have ever had or ever seen, and it works completely with either the Gallup or the Langstroth frame, the Langstroth frame being held endwise in the funnel when shaking the bees off the comb. I use this funnel much, in connection with the nucleus-box, and should consider no apiary complete without the funnel and the box, for with them we can make "swarms" or nuclei at our pleasure. G. M. DOOLITTLE.

Wintered Well So Far.

I have been a regular subscriber to the American Bee Journal now for 17 years, besides several copies in the earlier days. My bees have wintered well so far.

EMIL J. BAXTER.

Hancock Co., Ill., Feb. 4.

Fears Loss by the Cold.

Thermometers in this section are indicating from 25 to 30 degrees below zero to-day. I fear my entire apiary will be swept away by the extreme cold, as they were poorly fixt for winter. An early snow and freeze caught me napping. My bees haven't had a good flight for some time. J. M. YOUNG.

Cass Co., Neb., Feb. 11.

A Rather Poor Year for Bees.

We have had a rather poor year for bees in this section of country. I have 45 colonies of bees and only had about 500 pounds of comb honey. My apiary is located on Green River, in McLean Co., Ky., on a bluff about 200 feet above low water mark.

J. W. COLTHARP.

A Queen Experience.

About Nov. 1 I found a colony that had a drone-laying queen—a young queen. She had a deformed wing; in fact, one wing was all twisted up in something like a web, and fully half of the colony were drones, and the comb was full of drone-brood. I killed the queen, and I had a good queen to give them, which I introduced thus:

I take a small piece of screen-wire about 4 inches square, turn down about ¾ of an inch all around the edge and insert it in a frame of the drone-brood and honey, and put the queen and a few bees between the comb and the screen. I let her stay there 10 days, at which time I liberated her. When I took the cloth off I found an empty cell had a larvæ in it. For the first time with me in introducing a queen in that way, the bees immediately killed the queen. The reason I know it was she, her wing was clipt.

Well, I thought them worthless, as there were no drones flying, and no honey or pollen for the bees to get, so, as I thought the colony was no good, I decided to put a new colony in the old hive. So yesterday I cut a fine bee-tree and thought I would burn up this drone colony, take the bees out of the tree and put in it. I hived my bees in a sack, brought them home, and built a fire to burn the drones, as I thought. I began to take out the frames and burn the bees. I burnt those from the first three combs, and to my surprise the fourth comb was well filled with brood and had a nice laying queen on it, and no drones in the hive. Now, how do you account for this queen? Of course she must have been reared from those eggs that were laid by the queen I tried to introduce, and she must have been mated to one of those drones that were laid by the unfertile queen, as there are no drones at this season of the year, only in such a queenless colony. There is no brood here in the hives in November and December.

Will some of the expert bee-keepers tell how that queen was mated? I will be

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9A2ot **J. D. GIVENS, LISBON, TEX.**

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The Emerson stiff-cloth-board Binder for the American Bee Journal we mail for 60 cents; or will send it with the Journal for one year—both for $1.50. It is a very fine thing to preserve the copies of the Bee Journal as fast as they are received. If you have the "Emerson" no further binding is necessary.

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won't "sweep an avenue," but its screech will call attention. These little ads. may remind you we have larger ammunition for the asking. Write us.

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pleased to hear from them, unless she mated with the unfertile queen's drones.

The reason I hive bees out of a tree in a sack is, they are more easily carried out of the mountains. As we often have to carry them miles afoot or on a pack-horse, a hive or box would be too unhandy. The mountains are full of bees. I found five bee-trees yesterday, and it was too cold for the bees to fly, and the only way I could find them was by knocking on the tree, or blowing in the holes. But it is hard work, as it is so rough and steep. From the tree I cut yesterday I got five gallons of honey and ten pounds of wax.

W. D. JEFFERSON.

Graham Co., Ariz., Jan. 27.

Wintering Well.

Bees have wintered well so far in the cellar. The new department called "The Aftertnought" is a great improvement, for I think everyone will enjoy being "rubbed" after a little, after he takes his bee-medicine. PAUL F. BRATZ.

Waukesha Co., Wis., Feb 13.

Wintering Well—Prospects Good.

I have 30 colonies of bees in the cellar in good condition. I commenced with 24 colonies last year, spring count, and got only 500 pounds of honey. The prospects for the coming season are good.

RUFUS WILLIAMS.

Lawrence Co., Ind., Feb. 17.

Hard Freeze for Fruit.

We had a hard freeze here the first days of this month, which killed blackberry and raspberry bushes and nearly all larger fruit-buds; also killed a large percent of the prune, pear, and cherry trees. I think the prospect here for honey next summer is slim. This section of the State is not much for honey any year. C. F. HOLT.

Marion Co., Oreg., Feb. 23.

Fear Winter Losses of Bees.

The recent cold weather (terribly cold weather prevailing here now) will, I fear, work havoc with the bees. Their winter stores are composed mainly of honey-dew and aster honey. The black stuff has a great tendency to sour in the combs, and there is a sticky, nasty oozing out upon the cappings that means almost certain destruction. Our winters here have been so broken that almost any kind of honey would winter bees, tho I much prefer good, well-ripened honey for them.

Scioto Co., O., Feb. 13. W. W. MCNEAL.

Bee Mortality Not Great.

The weather has been very cold for more than two weeks, and bees have not had a flight since about the third week in January. The mercury has been below zero almost or quite every day for the last two weeks. Once it was 28 degrees below. Today it warmed up so that some bees flew at noonday. They made a heroic effort to clear themselves and also to clean house. The mortality does not seem to be great, but I never saw the snow spotted so badly. I am glad to say that the bees from one Tar Heel golden beauty, and one Buckeye State golden beauty, are standing the racket as well as any in the yard. These queens are going through their second winter.

EDWIN BEVINS.

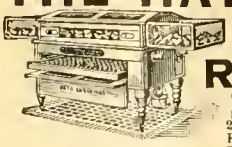
Decatur Co., Iowa, Feb. 14.

Wintering on Honey-Dew.

I send you a small sample of honey-dew for inspection. My bees are wintering finely so far, eating that kind of honey and staying on the summer stands, without any protection except the single-walled hives; no losses up to this date, 90 colonies in all.

I took about 4,000 pounds of this sort of honey last year—some 600 pounds of comb

THE HATCHING HEN



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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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and the rest extracted. Everybody likes this honey in this part of the country.

This honey was produced by the small white aphidæ or plant-lice, of which there were multiplied millions to be seen on chestnut and oak timber through May and June. July was wet, and that put an end to the little "honey-distiller" for the summer, and that ended the honey-flow until September, when the bees gathered some nectar from the asters. A. J. MCBRIDE.

Watauga Co., N. C., Feb. 8.

Weather Severe on Bees.

It is quite severe on bees just now, 32 degrees below zero and growing colder. My bees are in a cellar under the house, where there is no fire. The thermometer indicates 40 degrees; it has been 43 and 44 degrees all along until now. G. H. FREY.

Linn Co., Iowa, Feb. 8.

"Good" Winter Weather.

We are having good winter weather here—now 32 degrees below zero. I am wintering one colony out-of-doors; they will think it a little chilly. I also have 57 colonies in a repository, which are doing nicely at 37 degrees above zero. C. E. TAYLOR.

Ontario, Canada, Feb. 14.

Coldest and Snowiest.

Coldest and most snow here "within the memory of the oldest inhabitant." Would have to dig to find some of my hives. But as I am still shaky from the effects of the grippe, I can't get at them until the cold lets up. THOS. THURLOW.

Lancaster Co., Pa., Feb. 15.

Pretty Cold Weather.

The very cold weather has kept me in the house, where it is warm, but as I have no rest in doing nothing, I have taken all my Bee Journals into the house (which are all bound in yearly bands—my own way) since 1880, wherein I find much, to me now, right and wrong. Some of the ideas and theories almost coax a smile out of a failing human.

For the past ten days it has been from 20 to 40 degrees below, 30 degrees this a.m., 41 above in the bee-house, with a little gas in it. There is eight inches of snow on a level, making fine sleighing since Nov. 22.

C. THEILMANN.

Wabasha Co., Minn., Feb. 13.

Cold Weather—Foul Brood Bill.

I think there will be a demand in this section for "Schmidt's Hardy Bees," if the present cold weather continues very long.

It was 14 degrees below zero yesterday, with a strong wind from the northwest, and it was down to 23 degrees below this morning.

I am writing to our representative today in regard to the Foul Brood Bill which we are interested in at present.

JOHN S. DOWDY.

Logan Co., Ill., Feb. 9.

Best Bee-Winter in Five Years.

As far as I know, this has been the best bee-winter for the five years I have had bees. Steady, moderately cold weather, and for the last 2½ weeks we have had zero weather constantly. Bees did only moderately well last year. Too many sunflowers, from which they gathered very strong and rank amber comb honey, which improves with age and keeps fluid in the combs. D. J. FRASER.

Marion Co., Kans., Feb. 8.

Thinks It Very Cold Weather.

The weather has been very cold so far in February, the thermometer ranging from zero to 10 degrees below, with a piercing northwest wind which drives the cold

through almost everything except the fire. My bees have not had a good cleansing flight since the middle of November. I hardly know what condition they are in. It is too cold to think of opening hives to see, as they were all packt on the summer stands early in the fall, with plenty of good honey, and fairly well protected from the cold winds.

I had a fairly good crop of honey in 1898, mostly from buckwheat, which is all sold at a fair price. FRED E. WHITMORE.

Cayuga Co., N. Y., Feb. 13.

Something to Correct Fermentation

I think that boric acid is what Mr. A. W. Hart, on page 29, refers to, and I think he will find the article in one of the issues of the American Bee Journal of six or eight years ago, if my memory serves me rightly. That will not stop fermentation after it once sets in, but if put in while extracted honey is being cured, according to the article referred to, it will prevent fermentation. Extracted honey improperly cured, or, if properly cured, but stored in a damp place, is almost sure to ferment. The moisture should be well evaporated, and the honey then stored in a dry, warm room, and sealed in air-tight cans or bottles.

I am not acquainted with the chemical properties of this acid; it may, for aught I know, be very poisonous, and require very careful handling. B. A. THOMPSON.

Middlesex Co., Mass.

Cold and Windy Winter.

It is intensely cold, 18 degrees below zero, this forenoon. It has been cold and windy for 10 or 15 days, which makes me hunt the stove. I have 60 colonies in my bee-cellar, snug and warm, and 13 packt out-doors. I believe those in the cellar will come out far the best, as it has been a pretty cold and windy winter. F. C. LEFEVRE.

Adams Co., Nebr., Feb. 9.

Second-Hand 60-pound Cans for Sale Cheap.

We have another lot of about 150 second-hand 60-pound Cans, two in a case, that we offer, while they last, in lots of five or more cases (10 cans) at 40 cents a case, f.o.b. Chicago. They are in good condition. Better order at once if you want some of them. Address,

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Feb. 16.—This month trade has been of small volume in comb honey, due perhaps to the extreme cold that has made transportation dangerous, we now look for a better movement; yet the season is drawing to a close, as after the middle of March there is practically none sold until the new harvest is ready.

Fancy grade of white comb, 13c; travel stained and light amber, 11@12c; amber and dark, 8@10c; candied and mixt colors, 6@7c. Extracted, white, 6@7c; amber, 5@6c. Beeswax, 27@28c. R. A. BURNETT & Co.

DETROIT, Jan. 2.—No change in supply of honey as to quality, but prices are somewhat lower than last quotations, viz: Fancy white, 13c; No. 1, 12@12½c; fancy dark and amber, 9@11c. Extracted, white, 6@7c; dark, 5@5½c. Beeswax, 25@26c. M. H. HUNT.

INDIANAPOLIS, Jan. 4.—Fancy white comb, 12@12½c; No. 1, 10@11c. Demand fairly good. Dark comb honey is being offered at 8@9c with almost no demand. Clover and basswood extracted, 6½@7c. Beeswax, 26@28c.

WALTER S. POUDER.

NEW YORK, Jan. 20.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 7c. Extracted in good demand at unchanged prices. Beeswax rather quiet 27@28.

Trade in comb honey is quiet. White is pretty well cleaned up, but there is a large stock of buckwheat, amber and mixt, having accumulated of late, and in order to sell in quantity lots it is necessary to shade quotations.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, Feb. 8.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, Feb. 8.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

BLAKE, SCOTT & LEE.

KANSAS CITY, Jan. 25.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

BUFFALO, Feb. 24.—Closely cleaned up on fancy one-pound combs; such kinds move brisk to-day at about 12 cents. Other grades have cleaned up mostly, but few remaining which are selling at 9c down to 7c. Extracted honey not much used here; stray lots 5@6c. Fancy pure beeswax, 30@33c; common, 22@28c.

BATTERSON & Co.

CLEVELAND, Jan. 2.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

A. V. BISHOP & Co.

Convention Notice.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.

Mill Creek, Utah. J. B. FAGG, Sec.

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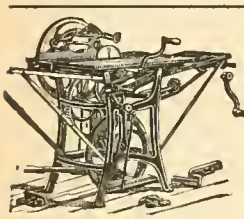

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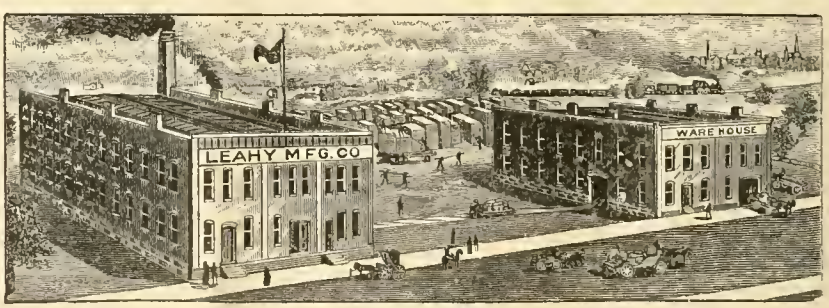

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in fact, nearly everything a bee-keeper needs. We also have at Glen Cove, L.I., two apiaries, and sell from them

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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MARCH 16, 1899. No. 11.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

The second quarterly meeting of the Chicago Bee-Keepers' Association was held Dec. 1, 1898, with a good attendance.

President C. Beers called the convention to order, and Secretary Herman F. Moore read the following paper by Hon. R. L. Taylor, of Michigan, on

Foul Brood in a Nutshell.

Foul brood is a term that is applied to a disease that attacks the larvæ of the honey-bee, and is attended with fatal results either before or soon after the cells containing them are capt. Unless remedial action be taken it generally results, in the course of a year or two, in the destruction of the colony attackt, not so much on account of the numbers of the larvæ destroyed as on account of the fact that from the consistency of the dead larvæ the bees cannot remove them, and so are precluded from rearing young again in such cells.

ITS CAUSE.

The disease is caused by the action of a microscopic organism termed "bacillus," from its rod shape. So far as I am informed its *nidus* or original home is not known, and the disease is spread only by the conveyance of the bacilli from one colony of bees to another.

HOW TO DETECT IT.

The healthy larvæ are of a glistening white color. When attackt by the disease they lose this lively appearance, and turn brown like coffee prepared with milk, when each is a homogeneous, glue-like mass. Now it is viscid or ropy, like mucus, as readily appears by inserting the end of a sliver in it and withdrawing it. This is the surest test of the disease, and for the greater part of the year the easiest to be applied.

This ropy mass after a time dries down and becomes a thin, dark-brown scale, lying on the lower side of the cell and reaching nearly, but not quite, to the open end of the cell. By holding the comb at the right angle in the light, these scales are readily seen, thus revealing the disease in the winter when there is generally no dead larvæ remaining in a viscid state.

Further, the cappings of comb much diseased are generally to a degree ragged, sunken, perforated, and discolored. The odor of a brood-nest much diseased is always bad, tho not always very strong, and will not be confounded, by any one having a good sense of smell, with anything else in the apiary, unless it might be with a bad case of dysentery.

Finally, a diseased colony has often its alighting-board near the entrance more or less bedraggled and dirty.

HOW IT SPREADS.

I speak not as a scientist nor as a microscopist, but from observations made during the practical handling of this disease. The bacilli multiply in the viscid matter of the dead larvæ, and the bees, in their efforts to remove the matter, get them upon their tongues whence they are conveyed to the cells of honey and then into the food of the larvæ. Sometimes, too, honey is stored in cells with the dried matter, which being thus moistened releases the bacilli so that they mingle with the honey. Of course, when such honey enters into the food of the larvæ they are pretty sure to contract the disease, and when such honey is carried away by robber-bees the disease is spread to new colonies. In endeavoring to control this plague, robbing in all its forms is the great thing to be guarded against.

HOW TO CURE IT.

Three days of comb-building with no brood to feed and no comb for the storage of honey, except what is made

R. L. Taylor.

within that time, frees the colony subjected to these conditions from all germs of the disease. The comb may be built either entire or from foundation. The problem then simply is, to put the bees under those conditions without permitting any robbing, or what amounts to the same thing, the mingling of any of the bees of the diseased col-

ony with other colonies. Practically, too, the prevention of robbing means the destruction of the identity of the combs and honey of the diseased colony by burning or boiling.

As comb-building is necessary for the cure, the best time for effecting it is during a honey-flow; and for the benefit of the novice in apiculture, I may say, also, and in conclusion, that the only time allowable (generally late or early in the day) for putting the bees under the conditions spoken of so as surely to preclude robbing, is when no bees are on the wing in the open air at all. R. L. TAYLOR.

Dr. Miller—How many have had experience with foul brood? [Two had.] Would you be willing to state what your experience has been?

H. S. Jones—The experience I have had is not practically with my own bees, but with those of a neighbor. I was called upon a year ago to come and look at his bees; he told me he couldn't get them to work or do anything with them; they were in bad shape. I found several colonies had foul brood. I went to work to clean the hives for him the best I could with what he had there; he had 40 colonies about a mile and a half from my place. He had never got any comb honey, and didn't know anything about it: the bees were let go winter and summer; I cleaned the hives up as best I could, and as far as I know they are in the same condition to-day that they were then; that was a year ago last summer.

Pres. Beers—He still holds the bees there?

Mr. Jones—Yes, and takes no care of them.

Dr. Miller—What did you accomplish by cleaning them up?

Mr. Jones—He saved several colonies.

Dr. Miller—How did you clean it?

Mr. Jones—I dumpt out the hives and started the bees on fresh foundation.

John Eenigenberg—I found some foul brood this fall in one of my colonies; I think there are some more pretty bad, too. I weighed the colonies before I put them in winter quarters, and they weighed 35 pounds each; and when I examined them they were just full of foul brood.

Pres. Beers—Have you done anything with them?

Mr. Eenigenburg—I burned them, bees and all.

Dr. Peiro—From my information, the gentleman's treatment is very heroic, but I want to know if there is any other way it can be done. If you attempt to save the bees, they may contaminate the others and this foul brood infection may be imparted to the other colonies.

Dr. Miller—One of the first questions that I would probably answer is, Is it worth while to take up time discussing foul brood where nineteen-twentieths have had nothing to do with it, and don't care two straws whether it is foul or clean brood? Perhaps under ordinary circumstances I should say it is waste of time, but I don't believe it is in this case. It is time you did know about foul brood; it is the severe scourge—the one danger you have to face that will make you wish you never had anything to do with bees at all, and you would better know something about it; we should understand something about what the thing is; the paper that has been read on foul brood here this morning is a good paper; I don't believe that there was ever written a paper that covered as small a space, and contained as much information about foul brood, as this one. Suppose you think of a lot of thistle-seed scattered over your field—what are you going to do about getting rid of it? You can take up the root, but in spite of that the seeds are scattered over the ground, and, do what you will, it will come up again. Please understand this: Bacilli are simply little plants, and the spores are the seeds of those plants. Don't think as I thought a good while ago, that they are little animals, or something of that kind; they are little plants, and if you can kill all the plants and all the seeds then you are rid of the disease. Dr. Peiro asks very pertinently the question, If you save your bees will they not still have those seeds and distribute them around? Those seeds must come into the proper place to grow. You can have thistle-seeds and carry them around in your pocket and they will do no harm, but put them in the ground and they are a most mischievous thing. The foul brood seeds must come into the larvæ; the bacilli may be more or less in bodies of bees possibly, but if you stop their being in the larvæ, you stop the whole business. The treatment is to throw your bees upon foundation and take away all the honey from them. That honey is contaminated, and it must not be used. Take a single drop of honey that comes from a foul-broody colony and it may cost you a hundred dollars, because you get the seed there. When you put your bees on foundation you understand they are not at that time having larvæ; they have perhaps in their honey-sacs some contaminated honey that is used in comb-building or for their own use. If you are going to keep bees I advise every one of you to get Dr. Howard's little book on foul brood (price 25 cents), and be ready for it; that 25 cents may do you a great deal more good than $100 after your bees have the disease. As part of the treatment is to throw them on empty frames, or nearly empty frames for the second time, everything they build has to be built fresh, and by that time all spores and plants have gone, and they are clean and pure, and you are rid of the disease, so far as that colony is concerned.

Mr. Eenigenburg—What would be the best season of the year to do it? The busy time of the year when they are working they use up the honey, but it won't make much difference this time of year, as things are quiet; if you attempt to go through with the treatment in the busy season you will lose the use of your colony. Don't you think the spring would be best?

Dr. Miller—The spring would be better than the following fall; suppose however it was August or September, it would be a better time than the following spring, because you get rid of it that much sooner.

Mr. Moore—Do you have foul brood in your apiary, Dr. Miller?

Dr. Miller—I am sorry to say I was fool enough at one time to say that I had never seen foul brood, and I was not going to see it, and would not look at it when I had an opportunity to do so. I am older now and have more sense, and would examine it carefully. I have never seen a case of foul brood. I am trying to tell you what you ought to do; I have informed myself about it, and don't believe that foul brood could come in my apiary and make very great inroads without my being able to spot it.

Dr. Peiro—I am interested in this thing; my bees may never have foul brood, and I may never see it, but I want to know the very best information I can get. I consider the cost, danger of it, and all that sort of thing, and I am quite of the conviction that our friend has done the very best he can, to destroy the whole business; but why do it in the fall when the combs are full of honey; why not do it before, and save the bees trouble and yourself expense? I think now if my bees had foul brood I would burn them up.

Mrs. Stow—Do I understand that the full-grown bees do not have this bacillus? It is in the honey and brood, is it not?

Dr. Miller—In the brood, but not in the organism of full-grown bee. A microscopic examination shows it sometimes in the grown bees, but it will not perpetuate itself in that way; it must be through the larvæ. Dr. Peiro says he would go through the same process our friend here did, burn it. If I had a colony attackt with foul brood I would destroy the whole business, root and branch, because it would be running too great a risk; but if I had a whole apiary infected before I knew about it, then I would try the other measure.

Dr. Peiro—Why not destroy it before the combs are full of honey?

Dr. Miller—You will not notice it, probably, until they are fairly started in the spring.

Mr. Eenigenburg—I examined my colonies in the spring, then they were all right, and lately I examined them and found some foul brood.

Dr. Miller—The Irishman's rule in a fight is, when you see a head hit it. When you see a colony affected with foul brood it is time to get after it.

A. P. Raymond—In the paper read by Mr. Taylor, he has told us the symptoms of foul brood. I am inclined to think many people believe their bees have foul brood when they have not any. I had a long talk about this with Mr. France, State inspector of apiaries of Wisconsin. He told me in his travels over the State he didn't find many cases of foul brood among extensive bee-keepers, but among those who had a few and did not take care of the bees. He stated one instance. One day he called upon a man who was about to drive out of his place as he (Mr. France) was driving in. The man told him he had some foul brood; that he had half a dozen or more colonies; he said, "I don't think it is necessary for you to look at them; I am going to burn the whole business to-morrow morning; it is my intention to burn up the whole shooting-match." Mr. France told him that as long as he was there he would like to go in and examine the bees. So Mr. France went in and examined them, and the man drove away. This I think was quite late in the spring or latter part of the summer. He found one colony—a new swarm that had its hive full of comb; the entire contents had broken down and laid upon the bottom-board, bees and everything. Of course, they

were all dead, and there was a horrible stench. He examined other hives, and found there was no foul brood in the yard at all. He went into the house and wrote a message to this man, to be delivered to him when he arrived home, telling him he had examined the bees and found no foul brood, and recommended taking out the hive that had broken down and save the rest of the bees. Mr. France saved this man five or six colonies of bees. So, as I said in the first place, we would better be sure ourselves that our bees have foul brood before we destroy them.

Mr. Moore—Have you had foul brood, Mr. Raymond, in your own apiary?

Mr. Raymond—No, sir; as Mr. France told me, he did not find any foul brood among extensive bee-keepers.

Pres. Beers—Principally among those who, in your opinion, are careless and do not pay much attention to their bees?

Mr. Raymond—I think many times, possibly, there is some trouble with bees, and their owners don't know what it is, and consequently they destroy the bees unnecessarily.

Dr. Peiro—Mr. Raymond's suggestion is a very good one. After all there is an intrinsic evidence in foul brood, and I suppose that any person knowing it can't go wrong; that is, the condition of the cells, and especially the condition of the advanced state of foul brood. As stated in the paper, it looks like coffee that has had milk in it and that is sticky; stick a sliver in it and it pulls out like thin molasses; now if that exists, why, I don't think I would hesitate very long to surmise it was foul brood, and destroy it.

Mr. Richardson—I would like to ask if there is any work giving a history of this parasite?

Dr. Miller—Dr. Howard's book gives more than you will get from anything else. [This book is mailed from the office of the Bee Journal for 25 cents, or sent with a year's subscription to the Bee Journal—both for $1.10—EDITOR.]

[Continued next week.]

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

TOO RESPECTFUL TO A CROSS COLONY.

Mr. Miles, you have written a first-rate article, and I guess you are all right, but it sounds almost as if you were too respectful to that extra-strong and cross colony you are preparing for cellar, on page 66. I was going to say, end the terrible tension at once; borrow a big cannon and blow the whole thing from the muzzle of it; but on the whole I won't say it. Under some circumstances your precautions are probably all right; only do not get our young brothers too much frightened before they are hurt any.

PASSAGE UNDER THE HIVE—DISGRACEFULLY SATISFIED.

Mr. Pettit's contention, on the same page, that a passage under the hive is better than the bottom off entirely—well, it may be correct, but Cogitator came through it without feeling that it had been proved exactly.

One gem of a thought that sparkles at the end of Pettit's article is where he tells us that the worst feature of the wintering situation is that so many are *satisfied*—satisfied with disgracefully imperfect results. Right he was, that time.

"'TATER" DREADS TOO BIG SWARMS.

Mr. Coverdale, page 67. Too big swarms that have to be "scattered among all nations" before they will stay any place. Yes, Cogitator is aware that there is such a thing. Even a seven-pound swarm should have a little extra thought and care—and room. And a ten-pound swarm 'Tater kind o' dreads.

ENTRIES FROM "RECORDING ANGELS" NEEDED AS SAMPLES.

So this is Aikin's way of recording: "4-1; 3-2-4." Which same means: April 1st, 3 frames would hold all the bees; 2 frames would hold all the brood; 4 frames would hold all the honey. Just to be hateful, Cogitator will complain that this doesn't look like an actual record. Two frames of brood too much to expect April 1st, of a colony only covering three frames.

Here is an actual entry from my own "Stand Journal:" "5-4 Bees (12) Brood (38) Hon. (F. P.)" This reads: May 4th, bees 12 *counts*, brood 38 counts, honey enough for the present. Of course F. P. are the abbreviations of "for present," capitalized for convenience and prominence in the book. A count of brood is a rude estimate of a quarter thousand, which would be a patch a little over 3 inches square, and I think of 3 inches when counting. Thus, 38 counts are expected to approximate 9,500 young bees; and the ease of reducing counts to thousands is a point in favor of the system. The counts of bees are (for convenience's sake) much less accurate; and I bear the fact in mind that weak colonies are likely to number less bees to the count than strong ones. Combs with only a few dozen bees on are counted nothing; combs with 200 or 300 count one; combs thinly covered count two; and combs well covered count three. Long practice makes the various counts come easy to me as I look through a hive. Bees (12) would be, two combs well covered, two thinly covered, and two combs with considerable bare territory.

If a number of "recording angels" would send in an actual entry or two, then perchance beginners in the r. a. business might choose an eclectic system, with good points from several, and faults of none. (Or would they do just the reverse of that?)

The weak point of the Aikin recording is that a progressive man will every now and then be making changes in his system; and ten years hence he will be unable to read his own records, they are so largely in the mind of the the recorder. Mine are full enough and clear enough that another person could probably read my record-books—with some effort and study.

BRACING FOUNDATION WITH SPLINTS—A TWO-PLANET CLIPPER.

I was much interested with Dr. Miller's method of putting brace splints on sheets of foundation, to prevent sagging, as given on page 70.

And so Ernest Root has been clipping queens 50 years. Well, well! case of transmigration; and he clipt the bees of some other planet 25 years before he came over.

DRONE-COMB OPPOSITE WORKER-COMB.

I guess the drone-comb opposite worker-comb (page 74, paragraph 3) is all right. The foundation was probably so heavy that the bees treated it just as they would a waxt board—first left one side alone then leveled and propolized it, and later on made it a half-comb of drone-cells.

WAS IT A LONG-TONGUED WOODPECKER?

'Tater wants to know whether that woodpecker's tongue was long enough to reach half the honey in the hive, or whether his everlasting thump, thump, thump, caused the bees to quit work, and eat the honey up themselves.

OPINIONS SPLIT LENGTHWISE AND CROSSWISE.

Query 89 is bad because it has two very different meanings. Suppose all the respondents had answered with a simple "Yes." Then some readers would have understood that a well-qualified individual, in a good location, might go into bee-keeping expecting to make his whole living out of it. Others would have understood that any ordinary person desiring an occupation might safely do so—a very different affair. Saying "any one" when we mean "every one" is one of the perversities of the English tongue—yet so common that it cannot be ruled out altogether. As it stands, the respondents are split lengthwise by their opinions, and crosswise by the view of the question which they take. About 15 out of 24 seem ready to encourage a good man in a good place. Apparently no one of the 24 thinks that indiscriminate plunging into apiculture offers a livelihood.

ADULT BEES ARE POLLEN-EATERS.

I think the impression prevails very widely among us that adult bees pass a considerable portion of their days without consuming any pollen. On this account I would jog the reader's memory once more on Dr. Miller's article, page 84. The Dr. Howard who is there quoted is one of the leading authorities. If every bee he ever dissected had more or less pollen-grains within, why, then, our impressions had better be giving way. Evidence pretty strong like a minnow in the milk—and our *impression* that the milkman is honest will hardly suffice.

MORE EGGS NOT ALWAYS MEAN MORE BEES.

One of the penalties of eminence as a teacher is that carelessness of speech cannot be tolerated. The "fierce light which beats about a throne" is not wholly fun for the throne occupant. On page 83, Mr. Doolittle remarks, "The more eggs the queen lays the more bees in the hive." At the time, and under the circumstances he is thinking of, this is measurably correct; but beginners and students are in danger of taking it as an axiom of truth. In their minds it may lodge in the shape that eggs laid by the queen are always developt into bees; and that is far from being true, if I have the right of it. The spring-dwindling colony can develop only a fraction of the eggs we see; and the nice patches of fresh eggs we see late in the fall, in normal colonies, are probably nine-tenths of them left to perish. A few days of cold rain in May will consign thousands of eggs to non-development. And whether colonies which might do better sometimes contract a vice of destroying eggs (just as poultry are known to do) is a matter which will bear some investigation.

A BATCH OF SHORT "AFTERTHINKS."

Forty colonies requeened with young queens, and not one of them swarmed, is an instructive item on page 84.

Average surplus of Colorado in an average season 12½ pounds, page 85. I wonder how near to accuracy they got that. It is not surprising at all, seeing how many people "keep bees" in a way to get (and deserve) nothing.

I would amend Miss Porter's removal of bur-combs and propolis lumps after uncapping by having the same done before uncapping.

Pres. Aikin goes rather beyond me in his directions for extracting honey in cold weather, but I guess he's right—24 hours of warm room, and the last hours 98 degrees or more.

Yes, Mr. Aikin, if you can get the foundation makers to "mill" foundation so it will hang the toughest way of the grain, and with sidewalls vertical, too, you will be winning a little gain for us—unless you bother 'em so much that they put on another cent.

Curious that 14,000 melted-wax foundation presses are used in Europe, and none in this country—and that style of machine once had a good start here, too. Colorado folks trying to start it again. 'Tater doesn't believe they will succeed, altho he wishes them well. Seventeen dollars for a $5.50 press shows that all the atrocities of transportation have not yet been overcome.

Never thought of it before that our editor is so wise because he's one of the Y's.

FOUL-BROODY COLONIES AND HONEY.

The proposed foul brood law, on page 88, seems to me one of the best yet suggested. But I wouldn't pay for colonies destroyed, except in cases where more than half the yard is destroyed. The increast value of the rest will be compensation. And I'd put the upper limit of compensation at one dollar. Very rarely the case that bees demanding destruction are *really* worth more than that.

It's a splendid and up-to-date idea to give foul-broody honey two short boilings rather than one prolonged one. (Page 89.) Damages the honey less, and makes a surer thing on the "varmints."

WAX RENDERING AND MELTING.

The Beckwith wax press and process, referred to on page 90, had best be copied, picture, article and all, in all the journals. Evidently the best thing in its line.

Very slow cooling of cakes of wax usually works well; and very rapid cooling will no doubt work fairly, if you see to it at once that the wax lets go of the sides.

WHERE STINGS DIDN'T STOP RHEUMATISM.

Page 94 scores a plain case where stings did not benefit rheumatism. That stings sometimes cure wonderfully, and sometimes do no good at all, seems to be the situation.

COGITATOR.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

CONTRIBUTED ARTICLES

The Spring Management of Bees, Etc.

BY C. P. DADANT.

I HAVE been askt to answer through the columns of the American Bee Journal the following questions:

1. How do you manipulate your brood-frames in order to get the greatest amount of bees to the hive? In other words, tell us something about frame manipulation and its relation to successful apiculture.
2. If you have both combs and full sheets of foundation, which would you use to hive swarms on, and which for extracting?
3. What are the dangers to a beginner in feeding bees?

P. D. GRAY.

The first and third of the above questions have a very natural relation to each other, so I will speak of these two first, and will afterwards consider the second question, which has no bearing on spring manipulation.

In the manipulation of hives in the spring there are two very distinct methods which ought to be considered comparatively and also separately to get into the details. The first method consists in allowing nature to work without any interference, except as it is absolutely necessary, in case the bees are short or weakened by circumstances beyond their control. This method is followed by the great majority of apiarists, but is certainly not always the most successful. The other consists in helping the bees in every possible way, by furnishing them whatever will tend to increase their activity and their prolificness; supplying them with food, extra space, additional shelter in cool nights, etc.

The first method is perhaps the safer one for beginners who are apt to overdo their part when manipulating the hive, and carry things to any extreme, which may prove even worse than a complete indifference to the condition of the bees. With an absolute lack of care certainly many colonies will suffer from want, or from extreme winter losses, and the loss in colonies will be great in hard seasons, after protracted and severe winter weather, or in cold, backward springs; but an experienced novice may lose as many bees through over-management as through entire indifference. In any case, it is entirely indispensable to ascertain early in the spring the needs of each colony.

The first requirement is a sufficient amount of stores to breed and recuperate winter losses to all colonies having laying queens. Queenless colonies need but little feed, as the brood consumes much more food than the adult workers. Then a queenless colony is less able to defend itself than one in normal condition, and is more likely to get robbed. So it is hardly advisable to feed them unless they are entirely destitute, or unless they have been given brood for queen-rearing, and are in a fair way to recuperate. But queen-rearing in this climate can hardly be attempted till April 1, and in the meantime such colonies must remain in *status quo*.

The apiarist who wishes to carry his bees through with the least possible expenditure of time will ascertain that all the colonies have a sufficient amount of honey, and not too great a breeding-space, and will then leave them to their own resources until the beginning of bloom. If this method is not a very forcing method, it has at least the advantage of not taking any risks of drawbacks and reverses through artificial forcing, when there is still a possibility of severe weather which might chill the brood of a too precocious colony. Yet, even with this method it is not advisable to leave four or five empty combs in a hive if there is only about the same number occupied by the bees. A large, cold space in spring is sure to delay the breeding, and here the division-board, or dummy, plays an important part by enabling the man who wants to succeed to reduce the space within normal limits, making a small colony as comfortable in its hive over the space it covers as a larger colony may be in a greater compass. Two or three, or perhaps four, visits to each colony during the spring will enable one to readily follow the progress of the bees, and enlarge their space as needed, wherever weak colonies have been found towards the close of winter.

But if an apiarist has the leisure to attend to his bees daily, or if he is making it his especial business to rear his colonies to the highest possible strength for the honey harvest, there is no doubt that he can achieve very much more,

and secure enough more honey to pay him for his extra pains, if he more closely attends to their needs. But, as I said before, it would be a great mistake to recommend this practice to the beginner, as he would perhaps overdo his work, and make a failure of his very eagerness for success. With this warning I will proceed to map out the course that may be successfully pursued.

As early as convenient, provided the weather is suitable, an examination of each hive is made, dead bees removed, and all weakened colonies reduced to not over two combs more than the entire number they cover. The weaker the colony the more closely confined it must be. If upper ventilation has been furnisht during the winter, and there is no probability of very hard freezing weather, it is best to close up all upper currents of air, for these have been given in the first place, only to prevent the gathering of the moisture over the combs during frosty weather. This moisture is no longer to be feared, but the air-current takes away heat, which is very necessary to the rearing of brood. So we close all upper currents and still retain as warm a covering as possible, and all the shelter that is available. The entrance of these weak colonies is reduced to a mere fraction. It must be of easy access, but as small as practicable. If feed is needed, and the weather is likely to be cold, so as to make it unadvisable for the bees to stir about, it is best to feed by supplying honey in the combs by interchange with more wealthy colonies. If the weather is fairly warm and likely to remain so, a little warm feed, but only a little at a time, is given right above the brood in a place of easy access.

Mr. Gray, in the questions askt above, refers to the dangers to a beginner in feeding. He has evidently "been there," and is not himself a "beginner." This early feeding of weak colonies is a stone in the path of the apiarist over which he will surely stumble, if he is not very cautious, as can probably be testified by hundreds of my readers. When we supply the bees with combs of honey sealed, and in good shape, there is no excitement. In a few minutes they have taken possession, and see no need of hurrying to consume it. But when warm feed is given it acts upon them exactly as a crop of honey would that began all of a sudden. They become so elated by their "find" that they lose all restraint, care for nothing, but spread the good news abroad, and not only stir up their own colony to unexpected activity, but even seem eager to spread the news to the neighborhood, and "gossip" it about from door to door, apparently, but in reality imagining that they may expect to find good things almost anywhere.

If the weather is cold, many bees will perish that have strayed too far away. If it is warm the buzz and excitement may attract some powerful neighbor, that will at once think of "expansion," and will try to annex the supplies of its weaker acquaintance. So it is necessary to keep a close watch and to use considerable discernment in the feeding of fresh food to weak colonies. Hancock Co., Ill.

[Concluded next week.]

Annual Report of Ontario's Inspector of Apiaries

BY WM. M'EVOY.

DURING 1898 I visited bee-yards in the counties of Essex, Middlesex, Huron, Grey, Wellington, Simcoe, Cardwell, Norfolk, Wentworth, Lincoln, Peel, York, Ontario and Victoria. I examined 100 apiaries, and found foul brood in 32 of them.

Nearly every bee-keeper that had foul brood in his apiary wrote me private letters about it, and, working on the rule of doing to others as I would like to be done by, I treated all such letters as if they were markt strictly private, and always will. By working along this line in a quiet way, and helping the owners of the diseased apiaries to cure their colonies, I have been able to find out more about who had foul brood in their bee-yards than could, or ever will, be found out in any other way.

I am very much pleased with the way the owners took hold and cured their apiaries, and particularly so with two that were cured by two ladies in the county of Simcoe. These two ladies did the best work in the shortest time that I ever had done, and with two of the worst foul-broody apiaries I ever handled.

Scarcely one week ever passes any more than I do not receive more or less letters asking questions about foul brood, and dead brood of other kinds. I have also received very many samples of combs with dead brood in them, and about seven out of every ten of these were genuine foul brood. The most of the letters, and samples of comb containing decayed brood, came from many parts of the United States, and the others from bee-keepers in the Provinces of Ontario, Quebec and Nova Scotia.

"About how long would foul brood be in a colony before it would become very bad with the disease?" was one of the questions askt by several of the writers. I answered, saying, sometimes not more than one week; in others over one year; but in the most of cases less than three months. Just how soon or how long it would be before any diseased colony would become very bad with foul brood would depend entirely upon how much, or how little, of the honey was diseased. The honey to become diseased must be stored first in cells where foul-brood matter had dried down, and when any honey is removed from such diseased cells, to cells partly filled with sound honey, it will disease it also. Foul brood is spread through a colony just in proportion to the amount of diseased honey that is fed to the larvæ.

I sent out Mr. F. A. Gemmill a part of the time, and he inspected 15 apiaries, and found foul brood in three of them. I am very much pleased to say that neither Mr. Gemmill nor I had to burn one diseased colony. We found all parties very willing to cure, and gave them a chance to do so.

I believe that the Province of Ontario has less diseased apiaries for the number kept than any country in the world, judging by the number of letters that I have received.

For the very nice way that Mr. Gemmill and I have been treated by all parties while on our rounds through the Province, we return to them our most heartfelt thanks.

Woodburn, Ont., Canada.

No. 3.—Doolittle's Talk on Bees at a Farmer's Institute in New York State.

BY REPORTER.

[Continued from page 147.]

HE next took the grains in a like manner, showing that buckwheat was the only grain raised in central New York which needed the aid of the bees, and that was the *only* grain that secreted nectar, yet time and again had jealous persons claimed a remuneration from him for the damage done their buckwheat yield, by the bees taking away the nectar needed to bring the grain to perfection! But with the farmer who had kept a record of his yields of grain from buckwheat, he had always been able to show him his mistake, by comparing that record with his honey record, so convincing the farmer that in the years of his greatest yield of buckwheat grain, Doolittle had secured his largest yields of buckwheat honey, and *vice versa*.

He then took garden truck, speaking of the vine family, and proved from Gregory, the great squash-raiser, how it was an impossibility to secure even an *imperfect* squash, pumpkin, melon or cucumber from any female blossom where bees had been excluded from the blossoms by tying netting over them as Gregory had done in his experiments at cross-fertilization, unless fertilization was accomplisht by the hand of man. His reasoning was so conclusive that many changed their views entirely, as was admitted by several to the writer, and from the energy Mr. Doolittle put in this part of his address it was very evident that herein lay the main object of his coming. But as before, he must clinch the point with a story which ran as follows:

A certain farmer dreamed he died and went to hell (not that all farmers go to that place!). And when he arrived there, an imp from the Satanic majesty met him to escort him around "sight-seeing" before he took up the place of his final abode. He took him first to a room in which were many politicians, all writhing and crying out in the terrible burning, which made the farmer shudder and draw back. Then to a place filled with lawyers burning in like torment. Next, to a place where there were brewers, distillers and saloon-keepers, where it appeared, if such a thing was possible, that the "burning" was hotter than any other. Then to where there were mechanics, then merchants, then a few ministers, who had mistaken their morality for the new birth; and church-deacons and members who had used their profession as a cloak to cover iniquity—all of whom were suffering such excruciating torment that the farmer was sickened in the extreme, and was about to say he had seen enough, when it came to him that he had seen no farmers in any of the places he had visited. So he inquired if there were any farmers that came there.

"Oh, yes, plenty of them," was the reply. "Would you like to see them?"

Assenting, he was taken to a room which was very hot, but in which there was no flame to be seen. To the ceiling of this hundreds of little turn-tables were fixt, which were slowly revolving around, while to each of the turn-tables was affixt the feet, or heels, of a farmer so that he hung head downward, slowly revolving in space, in that awful heat. The farmer appealed to the imp to know what it all meant, and was met with the reply that "the farmers when they came there were very 'green,' so much so that they had to be hung up in this way and be kiln-dried before they would burn!"

At this point the audience broke entirely away from the speaker, and for fully a minute went wild with laughter and applause, which was evidently "too previous" to suit him, as what he wisht to enforce more particularly was lost sight of in the merriment, as the point was forgotten, or failed to impress, through the ridiculousness of the story.

As soon as any degree of quiet could be restored, Mr. D. gave the "point," which was the finishing of the imp's speech, viz.: "Why, the farmers are so green that they would kill their best friends, the bees, by spraying their fruit-trees while in blossom."

Continuing, Mr. D. said: And now, in conclusion, I wish to say a few words which will not only apply to bee-keeping, but to all the pursuits in life. To be successful in the highest sense of the word, a person must *love* his occupation far beyond the dollars and cents which may come through it. I have been a careful observer for many years, and I have yet to see the person who makes a success of any business upon which he entered, when such was done wholly and simply to make money out of it. No, no, there is no success, either financial or otherwise, when the only thought which enters a person's being is *money getting*. We must love the bees until we see only *fun* in our work with them. We must love our horses until it is only *sunshine* to care for them, and see that they are comfortable. We must love the cows till an hour spent in their society is more precious to us than an hour spent at the corner grocery, listening to the idle gossip there, and the same with all our farming operations.

I have been keeping bees for 30 years, and still stings, sweat and toil are only pleasure to me, except the extreme pain for the first few seconds after being stung. Mrs. D. says I care more for the bees than I do for my dinner, any day. For often it is from five to fifteen minutes before I can tear myself away from them to go to dinner after she has called. And some of these cold winter days I go poking around to get even a glance at the pets, when attending to other parts of the business would be more to their advantage and mine.

I have listened carefully to all of the speakers who preceded me, and very little has been said except for the *profit or money* side of farming, poultry-raising and dairying, as if that were to be the chief objects in life. I wish to counteract that thought. The money-getting part should be secondary. "Seek ye first the kingdom of God, and then all these things shall be added." But I confess we are all built very much on the plan of the crane in the ancient legend. A beautiful white swan alighted on the banks of the water in which a crane was wading about among the reeds and rushes seeking snails for his breakfast. For a few moments the crane viewed the swan in stupid wonder, and then inquired: "Where did you come from?" "I came from heaven," replied the swan. "And where is heaven?" askt the crane. "Heaven," said the swan, "Heaven! Have you never heard of heaven?"

And the beautiful bird went on to describe the grandeur of the Eternal City, the New Jerusalem. She told of the streets of gold, the gates of pearl, and the walls of jasper; of the river of life, pure as crystal, upon whose banks is the tree whose leaves shall be for the healing of the nations. How there was no night there, no sickness nor crying, for God shall wipe away all tears from all eyes. In eloquent terms the swan sought to tell of the hosts who live in the spirit world, but without arousing the slightest interest on the part of the crane. Finally, the crane askt:

"Are there any snails in heaven?" "Snails!" repeated the swan; "no! there are no snails there." "Then," said the crane, as he continued his search among the reeds and rushes of the pool, "you can have your heaven. I want snails!"

Let us get away from the idea that the snails of money-getting are all there is of life, for many a man has sacrificed all there is good in life in his search for snails. Many a man has sacrificed all the comforts of home, wife, family, in fact his all, for the snails of sin. Oh, let us get a broader view of life, a *love* for everything about us—a love which shall give us more exalted views of life, and thus shall we be lifted to a higher plane, and as we are lifted up we shall draw others up, up nearer to God.

When Mr. D. had finisht he was given another round of applause, after which W. W. Newman, the man who gave the address of welcome in the morning, moved a vote of thanks for the good way Mr. D. had entertained them. This was seconded by a half-dozen voices, when the Wisconsin governor arose and said he believed Mr. Doolittle had been wrongly named, that it was evident that he had *done* more than a *little*, and not only this, but that he had had many *little* helpers all along the way in his pursuit.

The chairman of the meeting then arose and said he had been greatly interested, and wisht he could spend several evenings with Mr. Doolittle in talking bees, after which he put the motion, which was carried with much emphasis.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

Which Way Should Hives Face?

On page 117, Cogitator objects to my thinking there's no material difference between east and southeast as the direction for hives to face. Since he objects "respectfully," I'm willing to twist the hive that eighth of a circumference, but if I do that I'm afraid of getting into trouble with Editor Doolittle. In the last number of the Progressive Bee-Keeper he is very emphatic in preferring south to north exposure, especially if left on the summer stands through the winter. He says:

"Years ago I tried the experiment of facing a part of the apiary to the north, leaving them thus during the winter, and while those facing south had two or three good flights during the winter, and came out in good condition in the spring, those facing north flew scarcely at all, and all but one died before the next May; and even during the summer season, the hives having their entrances facing north would not start out to work in the morning for a long time after those facing south were fully started for the day.... In every apiary which I have visited during my 30 years of bee-keeping, I have found the hives facing from southeast to southwest, the majority facing SOUTH, which is the correct way, where hills do not seem to make it necessary to vary a little."

Now there you are. Doolittle says south is the correct thing, practice of others varying from southeast to southwest, making sure in any case of having that 12 to 2 sun to which Cogitator objects. Now how am I to manage to keep friends with both those men? C. C. MILLER.

Feeding Syrup.

I have 10 colonies of bees to feed, and I have no honey to feed them. What would be the best way to feed sugar syrup?

ANSWER.—If they can stand it till time for them to fly every day or two, a Miller feeder or the crock-and-plate method will be all right. If they must be fed right away, it will be better to fill the syrup in combs, so you can put it right in the hive close to the brood-nest. Lay a comb flat in a tub, and pour the syrup, pretty hot, into it from a height of four or five feet, preferably using some kind of a dish that will let it fall in a lot of little streams. One way is to punch a lot of holes in the bottom of a baking-powder can or something of the kind, hold this at the proper height, then pour the syrup into it from a pitcher or other vessel.

Frost in Hives in the Cellar.

I lookt at my bees to-day and found the hives full of frost, more on the rear end than on the other walls. Some were completely covered with a coat, I should judge, from ¼ to ½ inch thick, but where the bees were there was no frost. I scraped out the dead bees, which were not so many as I expected. I put my 18 colonies of bees in the cellar, 16x16 feet, when cold weather set in. The entrances of my hives are small; since reading the Bee Journal I found they were too small for any use. I have nothing in the cellar

but bees, and the temperature has been too low to be good, but it was impossible for me to keep it warmer. I am afraid when warm weather comes, and the frost melts, the bees will get wet and damp, and perhaps die. WISCONSIN.

ANSWER.—It is quite possible that no great harm may come from the frost in the hives, if it is only on the sides and not directly over the cluster of bees. But a cellar that is so cold as to let frost gather in that way in the hive is not a fit place to winter bees. Can't you heat up the cellar in some way for a few hours? If there is an inside door connecting with the kitchen, leave that open at night, keeping a good fire in the kitchen. If you can't do that, take down some heated stones or iron, or take down jugs of hot water. But don't try hot water unless tightly corkt so steam cannot get out. A stove with fire in it would be the thing, but it isn't likely you can have that. If the bees are uneasy and spot their hives with diarrhea, take them out the first day warm enough for them to fly, say on a bright day with the thermometer at 45 or 50 degrees.

Swarms from Clipt Queens.

Should two swarms issue from hives containing clipt queens at the same time, and cluster on the same place, on returning to the hives, would they all return to one hive, or go to the hives they came from? ILLINOIS.

ANSWER.—Generally they go back to the same hives from which they came, but sometimes all go to one hive. Sometimes they will do neither, but go to some other hive where there is a big commotion because of swarming a short time before.

Worms in Hives—Eight-Frame Hives.

1. I have some bees in box-hives. I lost one colony last fall with worms; how do you clean them out, and when is the right time?

2. I expect to use the 8-frame dovetail hives next season. Do you think the bees will winter in them on the summer stands? The thermometer gets as low as 15 or 20 degrees below zero. NEW JERSEY.

ANSWERS.—In box-hives you must depend upon the bees to clean out the worms, as there's no way you can get at the combs to dig out the worms. Strong colonies will not allow them to make great headway, especially if the bees are Italian.

2. Very likely they will winter all right, but 10-frame hives will be safer, for colonies are likely to be stronger and to have larger stores for winter. In either case they should have some protection for winter.

Moving Bees—Using Queen-Excluders with Sections.

1. I have bought a place and will have to move my bees about 2½ miles. Which do you think is better, to take them right out of the cellar and move them, or set them out in the yard and let them have a good flight, and then move them?

2. What do you think of using the queen-excluding zinc with sections? I thought some of trying it with a few hives, and giving them sections about the second or third day after hiving. My object in doing this is to give them lots of room in order to prevent swarming. WISCONSIN.

ANSWERS.—1. Decidedly, let them have a flight before hauling.

2. Under ordinary circumstances there is no need to use a queen-excluder with sections, but it's a good thing to do so when sections are put on immediately after hiving. But there is no danger of bees swarming within some time after being hived. Your idea is all right, however, to give plenty of room in supers.

A Queen Rearing Drones or Workers First.

Would a queen that was superseded late in the fall, after the bees ceast flying, be likely to rear first drone or worker brood, and why?

Case: A colony of blacks was transferred late in the fall, and after some weeks a weak queen crawled out of the hive, was pickt up, and soon died. Early in the spring capt brood was noticed and thought to be from laying workers, as no queen could be found. On introducing a new queen a black one was found in the hive, and captured. The introduction was not a success, and in taking care of the frames a cluster of worker-brood was found on the same frame as the drone or supposed laying-worker. I have thought perhaps the queen was not fertilized, and her first duty was to rear drones for that purpose, hence my question. MISSOURI.

ANSWER.—Whatever a queen might think about it, she never would be fertilized by a drone of her own progeny, for after she commences once to lay she will never be fertilized afterward. If reared in the fall, she might be fertilized in the spring, and then would be likely to lay the same as any other queen, principally worker-eggs.

Taking Bees Out of the Cellar for a Flight.

I have 75 colonies of bees in the cellar. They were all right up to the first of this month, but now they do not seem to do well; the bees are dying fast, and the hives are dauby. Will it be better to take them out of the cellar as soon as the bees can take a flight, even if there is a little snow on the ground, or later?

We had honey-dew here last summer, and the bees got a lot of that stuff. It was the first time that I saw honey-dew in this place; but we get good honey here. In 1897 I got 1,925 pounds of comb honey from 16 colonies, spring count, which I sold at 15 cents a box. Last year there was no honey. I got only 1,500 pounds of fall crop from 30 colonies, spring count. MINNESOTA.

ANSWER.—Yes, I'd take them out for a flight the first day it's warm enough. If snow is on the ground it may be of some advantage to make some effort to keep the bees from sinking in it. If very little, the ground about the hives might be swept. Otherwise the snow might be trampt down hard, or something might be used to cover the ground, perhaps straw.

Transferring from a Box-Hive and a Tree.

1. I have a colony of bees in a box-hive, and I would like to transfer it into another hive. How shall I do it, and when?

2. I know of a colony in a tree, and I would like to take it home and put it in a hive. How can I go ahead with that, and when would be the best time? PENNSYLVANIA.

ANSWERS.—1. Directions for transferring are given in the text-books, and hardly belong in this department. You will probably be as well satisfied to wait till after the bees swarm, and transfer 21 days after the swarm issues.

2. It depends upon circumstances what is best to do. If other trees are near by, it may not be a hard thing to take the bees home in the log where they now are. By means of a rope you may ease the falling of the tree when you cut it down so that the combs will not be broken. Tie one end of a long rope to the upper part of the tree, throw the other end over some part of a neighboring tree, and then when the tree falls you can let it down gradually. Then cut off the log above and below where the bees are, haul it home, and you can transfer it when convenient, either before or after swarming.

Changing Location of Hives and Arranging Them.

1. When is the best time to remove bees from their usual place?

2. Have you any special method of removing colonies?

3. Is it best to have colonies widely separated, or in groups? KENTUCKY.

ANSWERS.—1. If their location is to be changed it is better to make the change before bees do much flying. If bees are moved after they have markt well their location, they are likely to go back in considerable numbers to their old location. It will be some help, after they are moved, to put up before the entrance a board so as to hinder direct flight as much as possible.

2. No, just pick up the hives and carry to the new place.

3. There is some advantage in having them in groups, making it more convenient for the bee-keeper than to be obliged to travel over much ground. A good way is to have them in groups of four, one pair standing back to back to the other pair. A space of four inches is enough between hives, and four feet or more between groups.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. MARCH 16, 1899. NO. 11.

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Dot Contest Prizes will have to wait another week, we regret to say, before we can close them up. We began to sort out those given to the Langstroth Fund from the others, and found it such a large job that we couldn't possibly get it done in time for this issue. But next week, even if we have to work all the nights between now and then, we will be ready to make a final report on them. The prize money has long been ready for the successful contestants, but the clerical work necessary to arrange the matter properly is more than we anticipated.

Apis Dorsata and the Government.— Bion Walbridge applied to the Government to obtain some of the big bees that newspaper reports said would soon be introduced from the Philippines. The reply from Washington is publisht in Gleanings, and its main part is as follows:

The newspaper report which you mention was unauthorized. The Department has not, as yet, undertaken the importation of bees from the Philippines. Should they be obtained, however, they would first be carefully tested before any general distribution would be decided upon. If then the latter course should be deemed advisable due notice would be given to those interested, and your application would be favorably considered by the Department.

L. O. HOWARD, *Entomologist.*

When Apis dorsata arrives in this country it will very likely be promptly announced in the bee-papers. But it is very doubtful that they will be ready for general distribution among bee-keepers in this country before the Twentieth Century.

Publishing Post-Office Addresses of contributors to the columns of the Bee Journal is a practice we discontinued about two years ago. And we did it for very good reasons, too.

First, we decided that it was unfair *to charge* certain good people for putting their names and addresses in the advertising columns, and then in pure reading-matter putting the names and addresses of other people *for nothing*.

Second, we knew that many of our correspondents did not want to be pestered with a lot of letters from people they didn't care anything about hearing from. For instance, Mr. Stolley, who wrote on sweet clover recently, askt us to announce that he had no sweet clover seed for sale. But by omitting his full address, of course no one could well bother him. Once before, when he wrote on sweet clover, and his full address was given, he received many letters, and most of them from people who were unbusinesslike enough not to put in a stamp for reply, so Mr. Stolley was out his stationery, his time, and his stamps.

Third, if any one wants to do business through the Bee Journal he must pay for it. It costs money, and lots of it, to publish a paper like the Bee Journal every week, and it is only right that advertising should be paid for. The subscription price alone doesn't nearly cover the cost of getting out the Bee Journal.

Now, we trust that our readers will understand our position on this subject, and not keep on asking us *why* we don't publish the full addresses of our correspondents. Other papers can do as they like about this, but we propose to do the fair thing by those who pay us cash for putting their advertisements in the Bee Journal. We know that we have taken the right stand in this.

A Few Pointers on Foul Brood.—Mr. N. E. France, foul brood inspector for Wisconsin, sends us the following on the subject of foul brood:

"On page 90 is given G. Sawyer's method of curing foul brood, which is all right except that I object to burning anything containing foul brood upon the ground, but *always in a pit on level ground, and the clean soil returned over the ashes.* Foul-broody combs can be melted in boiling water and the wax safely used as comb foundation. If diseased honey is boiled in good earnest for 15 minutes, and stirred with a stick all the time (the stick then burned), the honey is safe to feed bees."

The Simplified Spelling of the English language is slowly gaining ground. For over two years we have been working on some words—using "t" for "ed" when the sound is "t," with a few exceptions; also *tho* for though, and *altho* for although. We think our readers are becoming familiar with this beginning, and will agree with us that it is time for us to make another advance in simplified spelling.

Mr. Irwin Shepard, secretary of the National Educational Association, sent out this notice last August:

ANNOUNCEMENT—AMENDED SPELLING.

The department of superintendence of the National Educational Association, at its meeting in Indianapolis, Ind., Feb. 17, 1898, appointed a committee consisting of Dr. William T. Harris, United States commissioner of education, Washington, D. C.; Dr. F. Louis Soldan, superintendent of schools, St. Louis, Mo., and T. M. Balliet, superintendent of schools, Springfield, Mass., to recommend a list of words with simplified spelling for use in the publisht proceedings of the department.

The report of the committee was duly made, and the spelling so authorized was used in the publisht proceedings of the meeting of the department held in Chattanooga, Tenn., Feb. 22-24, 1898.

At a meeting of the Board of Directors of the National Educational Association, held in Washington, D. C., recently, the action of the department of superintendence

was approved, and the list of words with simplified spelling adopted for use in all publications of the National Educational Association, is as follows:

Program for programme; *tho* for though; *altho* for although; *thoro* for thorough; *thorofare* for thoroughfare; *thru* for through; *thruout* for throughout; *catalog* for catalogue; *prolog* for prologue; *decalog* for decalogue; *demagog* for demagogue; *pedagog* for pedagogue.

You are invited to extend notice of this action, and to join in securing the general adoption of the suggested amendments.

We believe that we have always used *program* for programme in the Bee Journal, and *catalog* for catalogue, so there will be only about a half dozen more words that will require our attention, in order to be up with the National Educational Association. Next week we hope to begin on them, and trust that our readers will help on the good work all they can by also adopting the simplified spelling in their correspondence. It's a grand thing to be *leaders* in wise reforms, and we hope that bee-keepers will be in this one from start to finish.

How Much Honey at a Meal?—"Stenog," the new department editor of Gleanings, "touches us up" in this style on the subject of how much honey one can eat at a meal:

"It seems that Mr. York doubted whether three persons ever ate a pound of comb honey at one sitting. Mr. Murry says two often eat that much. Certainly—why not? Evidently Mr. York can't *bear* honey as well as some of us human bruins can. I can eat half a pound of good clover honey at one meal any day, with impunity (or milk without the impunity). But I never eat on a wager, nor to show what I can do. I eat to live, and stop when I have enough."

This leaves one in confusing uncertainty as to the real honey capacity of "Stenog." Does he mean he *always* stops when he has had enough, and that half a pound at a meal is the proper allowance, if taken with milk or impunity? and if so, how much could he stow away at a meal if he could secure a fair wage for his labor?

Good Advice for all bee-keepers is given in this paragraph by Editor Hill, of the American Bee-Keeper:

If the young bee-keeper has not already done so, he should now begin to put everything in readiness for the coming season. The busy days will soon be here again, and our success will largely depend upon the preparation we have made. Like a colony of bees, the mind of the bee-keeper is often materially advanced by a little "stimulative feeding" in the spring, which is handsomely repaid in the season's results.

Mr. Hill also wisely recommends the reading of a bee-book as a "spring tonic." It seems a pity that any one should think of making a thorough success with bees without getting and studying one or more of the several excellent bee-books and bee-papers now publisht. It would be time and money well invested.

The U. S. Association, through its General Manager and Treasurer, Mr. Secor, is sending out notices of expiration of memberships. We received the following recently:

My Dear Brother Bee-Keeper:—The Treasurer's books show that your membership in the United States Bee-Keepers' Association is paid to Jan. 1, 1899. If the record needs correcting to accord with the facts, I shall be glad to be notified. If correct, I shall hope to receive the amount necessary to renew your membership to date, including the current year.

The Board of Directors have some work in view which is in the interest of the bee-keeping fraternity, but it cannot be prosecuted without the help of those whom it is intended to benefit. The membership fee is $1.00 per year. It is hoped that all bee-keepers will feel so interested in the effort to protect the purity of honey, and, in fact, all bee-keepers' rights and interests, that they will become members at once, if they are not already.

Fraternally yours, Eugene Secor, *Treasurer.*

The new plan of thus notifying members was recommended at the Omaha convention, and must prove a good thing for the Association, in keeping up the membership list. While now there are only about 400 members, there should be a full thousand, at least, so that the Board of Directors would feel more like undertaking some adulteration cases that ought to be taken up now and pusht to a finish. Everything is ready except the cash to go ahead with; and that must be supplied by the bee-keepers—those who are most interested in the enforcement of laws against the adulteration of honey.

John Nebel & Son, of Montgomery Co., Mo., have sent us their annual bee-supply catalog for 1899.

* * * * *

M. H. Hunt & Son, of Wayne Co., Mich., have issued their 17th annual catalog of bee-supplies, a copy of which is on our desk.

* * * * *

Mr. Wm. J. Brown, of Skagit Co., Wash., writing us March 2, said:

"The Bee Journal is worth its weight in gold to a bee-keeper if he has the money to pay for it."

* * * * *

Mr. Geo. I. Wolf, of Cass Co., Ind., wrote us March 7, when renewing his subscription for another year:

"I can't do without the American Bee Journal, for I have learned three dollars' worth from its pages so far this year."

* * * * *

Messrs. R. H. Schmidt & Co., of Sheboygan Co., Wis., one of our regular advertisers, wrote us March 3:

"Business is good. We are also pleased to say that our bees are all in very good condition, and have had several good flights. We expect a rich honey harvest this year."

* * * * *

Mr. W. S. Pender, of the firm of Pender Bros., of Australia, is visiting in this country, calling on some of our principal bee-supply manufacturers and publishers. His own firm deals in bee-keepers' supplies, and does a large business in that far-away land. Mr. Pender is a very pleasant gentleman, and a thorough-going bee-keeper, having for several years edited the Australian Bee-Bulletin, now the only bee-paper in Australia, we believe. We trust that he will have a pleasant trip and safe return home.

* * * * *

Advantages of Direct Buying.—Certain manufacturing institutions have in recent years inaugurated a new system of disposing of their products which is unqualifiedly to the advantage of the consumer. It took courage to make the change, but they did it. Among the pioneers in this new method of doing business was the Elkhart Carriage & Harness Mfg. Co., of Elkhart, Ind., whose advertisement appears on page 173 of this issue. These people began this plan of doing business 26 years ago, and have adhered to it strictly ever since. The result has been so entirely successful that they are to-day the largest manufacturers of carriages and harness in the world selling to the consumer exclusively. They publish an extended illustrated catalog, which we will take pleasure in mailing to all our readers who request it, and mention the American Bee Journal when writing.

The Premium offered on page 172 is well worth working for. Look at it.

Selling Sections by Count is advocated by J. E. Crane, in the Bee-Keepers' Review. He thinks it absurd that the bee-keeper who produces thousands of sections of the same size and nearly the same weight should sell them by weight and then the purchaser should sell them by the piece. He thinks selling by count would have a tendency to the production of combs of more even weight.

Putting Empty Supers Over Partly-Filled Ones is practiced by many toward the close of the season, but is now recommended in the Progressive Bee-Keeper as a plan to be used all through the season for the sake of getting sections filled up more evenly in the super already partly filled. You may rely on the plan for getting the sections finisht sooner, but there is also danger that the sections will not be so white.

Do Bees Get Used to Movements? is a question raised by J. H. Martin, in the Bee-Keepers' Review. He cites the common observation that bees are not so troublesome where they are visited daily, and if the movements of the people make the difference, why not movements of inanimate objects? He thinks of planting a dozen flags in his apiary, so that their continual motion may make the bees take less notice of the movements of the bee-keeper.

Boiling Foul-Broody Honey 15 Minutes is held to be long enough by the Bee-Keepers' Review critic. To the argument of Dr. Miller that Prof. McKenzie succeeded in getting spores to grow after being kept for 2¼ hours near 212 degrees, Mr. Taylor has a counter argument that will be hard for the Doctor to withstand. He says the specific gravity of honey is nearly a half greater than that of water, so its boiling point will be above 212 degrees, giving the spores a harder roasting in boiling honey than in boiling water.

Queen-Traps for Swarms.—W. Z. Hutchinson has tried leaving queens unclipt and allowing them to go with the swarms, till he is heartily sick of it. His preference is for queen-traps. He says in the Canadian Bee Journal:

"I have tried both the clipping of queens and the using of queen-traps, and my preference is for the latter. It saves the time and trouble of hunting up and clipping the queen, the time and trouble of hunting for and caging her when the swarm issues, and there is no danger of her being lost by the swarm coming out when no one is present to care for it."

One-Pound Sections Small Enough.—J. E. Crane says in Gleanings: "The fact that the many attempts which have been made to use a half or quarter pound section have ended in failure would indicate that a section less than 4¼x4¼ is likely to prove unprofitable and quite impracticable. I tried it myself some years ago, but have not cared to repeat the experiment. Bees seemed to dislike to build comb and store honey in very small receptacles, or else were unable, when clustered in very small bodies, to secrete wax, and build combs rapidly. We have learned by the use of single combs of various thicknesses the thickness of comb that bees can build to the best advantage, which seems to be somewhere from 1 to 1⅜ inches."

Quilt or No Quilt?—In this country the tendency is toward discarding everything in the line of quilts and sheets, having nothing between top-bars and board-cover. Evidently the British colonies do not take kindly to this. The Australian Bee-Bulletin says it may do for comb honey but not for extracted. Disturbs bees too much in snapping up the board cover. The Canadian Bee Journal objects that too many bees are killed in putting on the cover. It may be a question worth considering whether in throwing aside quilts the bee-keeper may not be securing his own convenience at too great an expense in the way of comfort to the bees, but the man who is familiar with board covers without quilts will feel inclined to smile at the objections as to taking off and putting on board covers. If it be admitted that there is no trouble in taking off such a cover from a super of comb honey, or from a hive upon which it is expected to put such a super, what possible difficulty can there be with an extracting-super? Are not bees just as plenty and just as irritable in one kind of super as the other? And it will be hard to convince one with experience in such things that he cannot put on a board cover without killing bees in a great deal less time than he can get on quilt and cover.

As to the Value of Queens.—"The Boiler in the American Bee Journal, 42, says 'In opposition to the views of Editor Hutchinson, who says queens are the least expensive part of a colony....C. P. Dadant in Gleanings is emphatic in the assertion that in the spring the queens are the part of most especial value.' Why jumble language, brethren? Isn't the common air of 'most especial value,' and yet, isn't it the least expensive?"—Critic Taylor in the Bee-Keepers' Review.

That is a slight intimation that there is no difference after all in the views of the two men. Well, Mr. Taylor, look at the Review, 55, where Mr. Dadant says, "Queens, to us in early spring, are the most expensive part of a colony," and try your hand at reconciling that with Editor Hutchinson's statement that they are the *least* expensive part of a colony.

A Bee-and-Poultry Scheme is thus given by S. M. Keeler in the American Bee-Keeper:

"I have a small plot of ground that I sow to buckwheat the first of July, and seed it with crimson clover. The bees are ever ready for the nectar from both. When the buckwheat is ripe the hens are let in to harvest it, and grow fat. The clover comes in bloom the next spring, two or three weeks sooner than white clover, and just the time bees need looking to, to keep them from starving. And such a mass of red blossoms, and such a mass of bees humming over them, is very gratifying to the bee-man.

"Now, when the bees are done working the flowers, the clover is cut and cured, and run through a clover-cutter for the hens while they are in their winter quarters. Then the ground is put to buckwheat and clover again on the first of July. And so on every year."

Cold Facts in Favor of Plain Sections is what the editor of Gleanings calls the following statements (some would call them hot facts) by J. E. Crane:

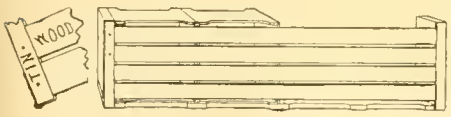
"Will the evolution of the honey-box bring the plain section into general use? I believe it will. One dealer in Washington told me he would pay three cents per pound more for the 4x5 plain-section honey than for the old-style sections. Indeed, I was offered two cents per pound more, for 5,000 pounds of clover honey, to be delivered next fall, than I have been receiving of late for my best grade of honey, if put in plain 4x5 sections. In New York I inquired of Mr. Segelken for his plain-section honey, that I might compare it with that in old-style sections. He said he had very little left in plain sections, as such lots were pickt up first by retail dealers, who preferred them to the old-style sections. I found the same true in Albany, N.Y., where I stopt to look over the honey. As these retail dealers are not in the supply business, I thought their opinions worth recording."

Ordering Supplies in Advance is very generally advised, and a sort of blame thrown on the man who does not send his orders some time before the goods are needed. By way of variety, a writer in British Bee Journal has this to say on the other side:

"I do feel, as a beginner, that this is a great grievance to us amateurs, who do not and cannot know, until experience teaches us, what we do want, and, in consequence, are kept waiting by tradesmen, who ought themselves to know by experience when, and to what extent, the rush of orders will come in. It is the only trade I know where the seller has the face to expect his customers to tell him beforehand what they will want: and in our case—I speak for us novices—we do not know, and the tradesman loses what might turn out afterwards to be good customers by the fearful delay in supplying the most simple and absolutely necessary articles, and thus frequently putting back a beginner to so late a date that he is unable to make a success by having everything *en train* at the proper time, and perhaps even disgusting him for good in consequence."

Root's Column

This is a Queer World. We cannot be made to see all things alike. Some like one thing, and some another. There is a class, no doubt, who hesitate to try Plain Sections because of the extra expense of the fixtures. There is another class who would not have them anyhow. Well, we are prepared to suit everybody. We have just brought out a slat separator to take the place of the ordinary tin or solid-wood separator.



They are simply four slats bound together at the ends by folded tins. They can be used in any super taking the old-style sections; and their cost is hardly any more than wood separators. We can supply them for 80 cents per 100, either for T supers or for section-holders. For odd-sized supers, of course we shall have to make additional charge. They can be supplied with our regular S super—that is, the supers with old-style sections and section-holders, or with our regular T supers.

Mr. J. E. Crane produced several thousand pounds of honey with separators of this kind, and he is of the opinion that the freer communication afforded gave him fuller and better boxes; but the boxes were hardly as complete and nice as those from fences.

Keep Your Eye on this Column, as we may be able to save you dollars.

The A. I. Root Company
MEDINA, OHIO.

General Items

Report for 1898.

My report for 1898 is 42 colonies, spring count, increast to 85, and took 2,000 pounds of extracted and 500 pounds of comb honey, principally from cotton-bloom. Honey from this source granulates very readily on the first approach of cool weather. Our winter is now about over, and I have lost only 3 or 4 colonies.

Of course no man or woman should attempt to keep bees without a good journal, and also a text-book, and read and re-read the good items. Don't get them and lay them away. J. A. ROSSON.

Ellis Co., Tex., Feb. 19.

Artificial Heat in Wintering.

I put 70 colonies into the cellar last fall, and they are all alive at the present time, but it has kept me guessing for the last month, for it has been from zero to 40 degrees below, and I had to keep a fire in my cellar most of the time to keep the bees in good shape. Don't tell me that artificial heat is bad for bees in this part of the State, for I have used it for three years, and have not lost a colony.

It was a poor season for bees last year, and I got only half a crop. From 50 colonies, spring count, I took 4,200 pounds of extracted honey, mostly white. I have kept bees 10 years, and do not know much about the business, but am learning every year. I give the credit to the American Bee Journal, "Bees and Honey," "A B C of Bee-Culture," and Doolittle's "Scientific Queen-Rearing," for every man ought to rear his own queens. A. E. BRADFORD.

St. Croix Co., Wis., Feb. 20.

Good Season in 1898.

The season of 1898 was very good here, but the honey was all dark. I got about 400 pounds, but all was dark except about 50 pounds. I have 17 colonies, all doing well. I take great interest in bee-keeping, and like the Bee Journal very much.

S. M. HODGES.

Vermillion Co., Ill., Jan. 27.

A Little Bee-Experience.

The American Bee Journal has been a great help to me during the past year. I started by catching and hiving a swarm in the spring of 1897. They gave no increase or surplus that year. Last year I got no surplus from them, but they gave a swarm May 1, which I also hived in a box-hive. This new colony also gave a swarm Aug. 1, and 20 pounds of surplus comb honey. I also got one after-swarm from No. 1, which has built up; and I bought a swarm on a bush from another man June 21; this last gave me 40 pounds of nice section honey. The last three colonies are in dovetailed hives, and I want to transfer the two from box-hives in the spring. E. L. HAYES.

Jefferson Co., Ill., Feb. 9.

Glorious Rain in Northern Calif.

We had a glorious rain last night. The weather is yet cloudy, and I believe we shall have occasional showers. The rain we had last night was very opportune; it will save the crops in the northern portion of the State, and somewhat in the southern central portion, where it has fallen. I do not think any rain fell in the southern portion of the State, at least this morning's papers do not mention such fact.

With rains every few weeks, and no drying winds, we shall have a fair crop of fruit, grain and honey all through northern California. I wish I could say as much for the lower part of the State. Those who have

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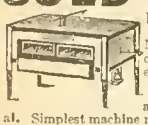

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are sold on trial subject to your approval. Simplest machine made. A child can operate it. The biggest catalogue and "poultry pointers" book published, sent for 5c. Plans for Brooders, Poultry Houses, etc., sent on receipt of 25c.

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been south tell me that things "are done for" there this year. 'Tis too bad. Hay is $18 a ton here; I am told that south it is $30. That makes it very hard on those who have stock, especially stock-raisers. Meat has about doubled; butter is higher than usual at this time of the year. Eggs are cheap enough; I learn that this State is shipping large quantities to the East. I suppose the warm weather here has caused hens to lay abundantly, while the very cold weather in the East has prevented the egg-crop from "maturing." W. A. PRYAL.

Alameda Co., Calif., March 1.

A Rather Severe Winter.

Our 12 colonies gave us about 175 pounds of salable second-grade honey in 1898. We have had a rather severe winter thus far, and not having given them any better honey I expect some loss, but discouragement has not entered my mind.

D. H. HORST.

Holmes Co., Ohio, Feb. 28.

Bees in the Best Condition.

I started in the winter with 43 colonies, and haven't lost one to date. I find them in the best condition with plenty of bees and honey. I have kept bees for 20 years, and never had such "luck," as some people call it. I think plenty of young bees and good sealed honey, with dry hives, is the secret, tho the thermometer has registered 17 degrees below zero—the coldest winter I ever saw in this country. Success to the Bee Journal. GEO. W. KNIGHT.

Oldham Co., Ky., Feb. 22.

Expect Heavy Winter Losses.

Bees did the next thing to nothing here last year. There was no surplus to speak of, and bees gathered but little to winter on. We have had three weeks of bitter cold weather, which will finish at least 90 percent of the bees that were out-doors. It would be impossible for them to get to their feed in such weather. Well, they might as well starve now as later on. That is what will happen to all the bees in this part before fruit blooms unless they are fed. Bees that are under ground will be all right until taken out, then they must be fed. I have now 20 colonies in the cellar, which are wintering nicely so far, but I will have to feed them in the spring. L. C. WATTS.

Jasper Co., Iowa, Feb. 20.

Quite a Number of Dead Bees.

I hear of quite a number of dead bees through this county. Most of the new swarms have died, and some old ones, which were run for extracted, there being no fall flow, and nothing after basswood.

Linn Co., Iowa, Feb. 21. G. H. FREY.

Good Report from Central California

All the bee-keepers in California are not quite so blue as Mr. McIntyre, of Ventura county, makes them out in the American Bee Journal of Jan. 5. The bee-keepers in Southern California may feel blue, but I assure you they don't in Central California, where they get a crop of honey every year. It is not here like it is in the southern part of the State, where they only get a crop every fourth or fifth year.

I also saw that Mr. J. H. Martin (Rambler) says the absence of moisture another season would about use up the industry in this State. It would be well for those gentlemen to state their location, and not compare their locations with the whole State. The counties of Kern, Kings, Tulare and Fresno are not to be compared with those barren rocks of Southern California. The counties above mentioned have thousands of acres of alfalfa for bees to work on, to say nothing about the thousands of acres of fruit-bloom, raisin vineyards and wild flowers in which the wastelands abound.

My crop for 1898 was 9½ tons of ex-

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And we would like to have our regular subscribers help us in this work. In order that all who may want a copy of Doolittle's "SCIENTIFIC QUEEN-REARING" may earn it very easily, and at the same time aid in swelling the Bee Journal's list of subscribers, we wish to make the following **Liberal Offers**—only to our present subscribers:

Offer No. 1. We mail the book for $1.00, or club it with the Bee Journal for one year—both for $1.70.

Offer No. 2. Send us **Three New Subscribers** to the Bee Journal for the balance of the year, **at 60 cents each**, and we will mail you a copy of the book free as a premium.

Offer No 3. Or, send us **two** new subscribers to the Bee Journal for the balance of this year at 60 cents each, and 40 cents additional making $1.60 in all and we will mail you the book.

Offer No. 4. Or, send us **one** new subscriber for the Bee Journal for the balance of this year at 60 cents, and 65 cents additional making $1.25 in all, and we will mail you the book.

Now, the sooner the new names are sent in the more copies of the Bee Journal they will get for their 60 cents, and if sent before April 1, each will be certain of getting the Bee Journal for **nine months**, or about 40 copies.

Remember, that only our present subscribers can take advantage of the last three offers above.

Now, let everybody go to work, and help roll up the 1,000 new subscribers.

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tracted, and 4½ tons of comb honey from 440 colonies; and lots of other bee-keepers did better than I did. And 1898 was not nearly so good as 1896, and a little better than 1897. R. H. FRAY.

Tulare Co., Calif., Feb. 5.

"California White Clover Honey!"

Some grocery stores in this city are selling extracted honey put up at Chicago in one-pound glass jars. It is all liquid with a small piece of comb honey floating in it, and is labeled "California White Clover Honey. Franklin McVeagh, Chicago." It is retailed at 10 cents per jar. Is there such a thing as California white clover honey? I had some curiosity to taste it, but did not like to buy any of it.

JOS. M. NIEMANN.

Jackson Co., Iowa, Feb. 18.

[Yes, Mr. Niemann, we got a sample of the same stuff you refer to, here in Chicago. It is a most villainous liquid. Of course it never saw California, but was put up by the firm named. What a pity that those who put up such vile stuff, and palm it off as honey, can't be put where they can't defraud honest people. It is simply a form of robbery, and often carried on by people that would feel terribly insulted if they were called common thieves, which they really are. All the difference between them and those that often are sent to the penitentiary is, that the former are often millionaires, and the others are poor fellows.—EDITOR.]

Bees in No. 1 Shape.

I presume all the readers of the Bee Journal will be glad that our little smoker apiary of 144 colonies showed up on Feb. 21 all right, with no more dead on the bottom-boards than usual, while the mercury was 10 degrees lower than for three years past.

My long, high entrances, all wide open, enabled me to clean the bottom-boards very handily of dead bees. Much has been written about wide entrances of late. All of my bees are treated alike, all having ⅞-inch high by 12 inches wide, wide open, entrances. The hives have shrunk in weight since Nov. 10, an average of 11 pounds each, and now have 18 pounds all sealed honey, and no brood. They are dry, clean, and in No. 1 shape. T. F. BINGHAM.

Clare Co., Mich., Feb. 24.

Bees Seem in Good Condition.

I like the American Bee Journal very much indeed, and find much valuable information in its columns. Tho a subscriber for little more than a year, I feel I could not get along without it.

I have 130 colonies of bees wintering on the summer stands, and seemingly in good condition. Bees had a good flight to-day. I have this winter made 125 hives for use next summer, so you see I have not been idle. I have a nice 2½-story honey-house in which I can conveniently work in the winter. WM. J. STEWART.

Utah Co., Utah, Feb. 18.

Something to Arrest Fermentation.

On page 82, Cogitator says that Mr. Hart wants salicylic acid to put in his sour honey. I do not think I do. It may be all right for some embalming purposes, or in some ointments, but, as Cogitator says, I should hardly think it healthy as a diet.

The honey was supposed to be ripe enough to work with, but aside from that feature it was all extracted within two days, and put up in Mason jars, pints and quarts. If unripeness is the matter, why would not all the honey be affected the same way? Whereas nearly all of it is nice, and only four or five quart jars show a little fermentation, but not bad.

The article I referred to said the recipe

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ALFALFA HONEY.

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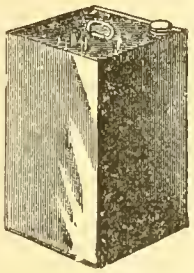

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Thin Flat-Bottom Foundation
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There's no **winter of discontent** known to the **Page**, but only perpetual **spring-time**. That's why it "comes out right in the spring." Notice it.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

given would arrest fermentation, and sweeten the boney, but did not say a word about any deleterious effects. We do not want to use it, only I thought it might do then to feed the bees this spring. Will it do? A. W. HART.
Stephenson Co., Ill.

Last Season's Results.

I started with 9 colonies in the spring of 1898, lost 2 by bad mamagement, and had one fine swarm leave after I had hived it, but I had 9 colonies in good condition for winter. My average was about 30 pounds to the colony. I could not do without the American Bee Journal. DAVID J. OTT.
Augusta Co., Va.

Only a Moderate Year (1898).

We very much appreciate the "Old Reliable"—could not do without it. We like the two departments, "Beedom Boiled Down" and Cogitator's "Afterthought."

Last year was only a moderate one with us. From 260 colonies, spring count, we secured 20,000 pounds of comb and extracted honey, and increast to 325 colonies. We now have 450 colonies to commence with this year. We hope for a better year.
O. P. HYDE & SON.
Williamson Co., Tex., Feb. 16.

Starters in Brood-Frames.

I see a good deal said in regard to starters in brood-frames, and I wish to tell you the way I do. I make my frames with the top-bars one-half inch by one inch, then I take combs that are nearly straight and cut strips about half an inch wide, and glue them on the underside of the top-bar. It saves foundation, and is better.
Warren Co., Pa. GEO. WHITCOMB.

A Beginner's Experience.

We had a poor season last year for honey. I purchast 21 colonies in box-hives and transferred them to frame hives. I got 300 fairly-filled sections, have plenty of stores for spring breeding, and lost but one colony by robber-bees during my absence from home for a few days. Isn't this doing well for a beginner? I had lots of trouble at first watering bees; they would get drowned in everything that held water. Finally I filled a pan level full with coarse gravel, and set it in the sun where water from a barrel would drip into it fast enough to keep it full. In a week I had all the bees in the neighborhood coming for water, and no more drowned bees.

Success to the American Bee Journal; it is worth dollars to me. W. H. BAKER.
Yolo Co., Calif., Feb. 13.

Convention Notices.

Texas.—The Texas State Bee-Keepers' Association will hold their 21st annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1899. All interested are invited. No hotel bills to pay.
W. H. WHITE, Sec.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.
Mill Creek, Utah. J. B. FAGG, Sec.

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Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight.
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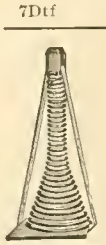

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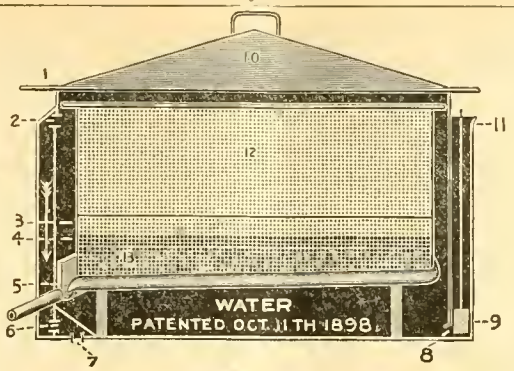

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

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1Dtf AUGUST WEISS, Hortonville, Wis.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 7.—Fancy white comb brings 13c., and there is a good demand for it. No. 1 white is also wanted at 11@12c., depending upon quality. Lower grades of white, amber and mixt colors range from 8@10c., with dark and buckwheat 7@8c. Extracted white clover and sage, 8c: basswood and alfalfa, 7c: amber grades, 6c: buckwheat, 5½@6c. Beeswax, 27@28.

Market generally healthy in tone with best grades of honey scarce. R. A. BURNETT & Co.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c.

M. H. HUNT.

KANSAS CITY, March 10.—Fancy white comb, 13c: No. 1, 12c: amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 9.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7½c; light amber, 6¼@6½c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

BOSTON, March 10.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No.1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

BLAKE, SCOTT & LEE.

OMAHA, March 13.—The stock of comb honey in this market is very light. There are not over 300 cases of all grades in first hands. Demand continues fairly active. Fancy white quotable at 13c; choice, 12c; No. 1 amber, 11c. Extracted well cleaned up. PEYCKE BROS.

BUFFALO, March 10.—There is only very little dark poor honey in our market, which is selling at mostly 8 cents. Some strictly fancy white comb honey would bring about 12 cents. Little, if any, here. No extracted to mention. Fancy pure beeswax, 30c BATTERSON & Co.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c: A No. 1 amber, 10@11c; No. 2 amber, 9@10c: buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c: dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c: dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

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Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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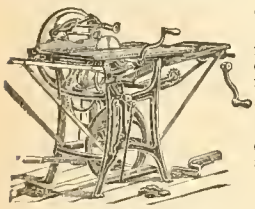

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To say to the readers of the BEE JOURNAL that

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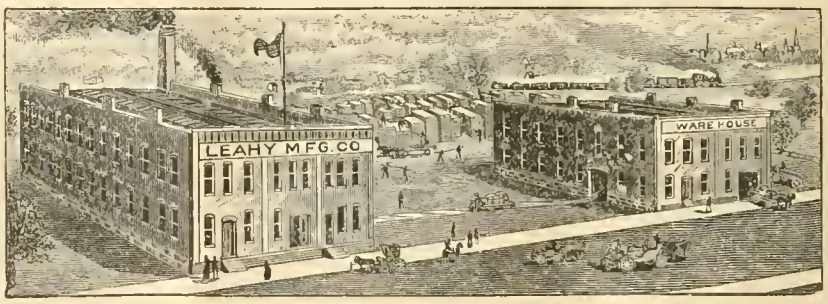

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MARCH 23, 1899. No. 12.

CONTRIBUTED ARTICLES

Several Opinions on the Origin of Honey-Dew.

MY attention has been drawn to an article on page 17, by my friend, Prof. Cook, on "Honey-Dew," and he sums up his article by saying that "Honey-dew is always a secretion from insects."

My object in writing is to say that I believe it is no longer a matter of conjecture, that under certain atmospheric conditions a saccharine substance or sweet juice exudes from the surface of the leaves of trees and plants. I at one time thought very much like Prof. Cook, but I have had ample opportunities of observing that in many cases insects have nothing whatever to do with producing honey-dew.

Some years ago, when I was staying at Hohwald, in the Vosges mountains, I had a very good opportunity of convincing myself that those were in the right, who held that plants do at times exude a sweet juice which is eagerly sought after by bees, while that produced in insect agency is very reluctantly taken by them, and then only when the natural exudation is not available.

Gaston Bonnier is one of the most careful observers and experimenters that we have at the present day, and he not only asserts that the leaves of trees do exude a saccharine substance under certain atmospheric conditions, but he has also been able to reproduce the phenomenon by placing the branches of trees in water and subjecting them to similar conditions. At any rate, he is not likely to be misled by not looking for the insects on the tops of the trees, as it is at the tips of the branches that any one but a tyro would naturally expect to find them. THOS. WM. COWAN.

Monterey Co., Calif., Feb. 20.

Prof. A. J. Cook, in his article on honey-dew, on page 17, hopes that all readers of the American Bee Journal will observe closely this honey-dew question and report.

Tho not a scientist, I have spent quite a little time in observing the origin of honey-dew, and from what I have seen and observed I have come to a different conclusion from what the Professor did when he says, "Honey-dew is always a secretion from insects."

I admit that much of the honey-dew is a secretion of insects, of which we can satisfy ourselves without climbing the trees where it exists, or where we find the honey-dew on the leaves by jarring the tree or brush, and looking towards the sun in the morning after sunrise, or in the evening a half or three-quarters of an hour before sunset, when you will see hundreds of sprays crossing each other in rainbow shape several feet high from where the insects stand on their legs while they operate their spraying-tubes. This is quite a curiosity, as they will repeat their sprays a number of times, when the tree is jarred. The readers will see by this that the honey-dew will not only be found on the lower limbs and leaves of the tree, as the Professor indicates, but these sharp sprays will also reach the tops, as I have often witnest on some plum-trees in my apiary, and on many other trees and plants.

But this does not prove that *all* honey-dew is secreted by insects, and that none exudes from plants and trees as a saccharine substance. I have seen my bees working lively on the joints of the cornstalks about the time when the tassels come into bloom; and when we had a dry spell previous to this, and then had a good, warm rain, which gave a vigorous growth to the corn, and an overplus of sap, probably more than the stalks could hold, and consequently produced honey-dew at the joints, there were no insects there. These conditions occur only once in three or four years.

C. Theilmann.

The honey is of very fine quality, and has a golden color. Some years I have received considerable surplus from this source.

Some years, when the right conditions meet, the birch-trees produce honey-dew in large quantities. Some years

ago I received from them about 1,500 pounds of surplus honey of the most delicious flavor, and almost water-white. The honey gathers at the junction of the leaves and the newly-growing twigs, where a small drop of "honey" can be seen from some distance away.

The birch and corn do not yield honey on their blossoms any more than does hazelbrush, at least I never saw bees work at all on the birch-bloom, but I have often seen them work on corn-tassels for pollen. Some bee-keepers claim that bees do not gather honey from corn-blossoms, which I think is correct.

The honey-dew on the birch-trees does not fall on the leaves like a "gentle rain," but drops on the leaves below from where it exudes, if not taken up by the bees or other insects. I have seen the honey glistening at the junctions of the birch twigs, only a few rods from my apiary, while the bees were briskly gathering the nectar. My bees sometimes were in such excitement that you would think every colony was swarming; but as soon as the condition of the atmosphere changed the excitement ceast. Sometimes it lasts only a day or two, while four or five days is the longest I have seen it in one season.

I am positive that this is no insect production, for I have examined it very closely and persistently.

I am not so sure that the acorn honey is an exudation of the overplus of saccharine substances of the tree or the acorn, or whether the acorns are pierced by insects to make the sap or nectar flow from them; the Professor seems to be "on the rail" himself about *this*, and seems to be anxious to know if the acorn honey-dew always comes from what he supposes to be wounds of the nuts by insects. (See page 459 of the American Bee Journal for 1886.)

I have examined the acorns closely from the lower part of a tree to the very top, but have not discovered any larvæ nor any caterpillars on them, nor any other insects; but nearly all the acorns on the same trees were wounded horizontally right above the acorn-cup from which the "tannin" nectar oozed. The wounds extended to the center of the nuts, but I did not discover any larvæ, tho I examined only some of them closely. I will make a more extended search the next time I get a chance.

The acorn honey is the poorest in taste and color of anything my bees gather.

In conclusion, I find that honey-dew is not "always" a secretion of insects, and that some trees and plants produce nectar under certain atmospheric conditions, regardless of insects, or blossoms, and that the definition in our dictionaries is in line with my experience.

Wabasha Co., Minn. C. THEILMANN.

I have read the article on page 17, from Prof. A. J. Cook, in regard to the origin of honey-dew, and as he invites the readers of the American Bee Journal to make close observation and report our experience. I will report.

I am 66 years of age, and have handled bees more or less all my life, and now have 72 colonies. I have seen honey-dew as far back as I can recollect; I used to lick it off the hickory leaves when a child, because it was sweet. I have seen it on trees, shrubs, and all kinds of grass, and I have found it on my oilcloth when I was a soldier. I have found it on the plains, and much of what I know has been learned from observation. I have given it a great deal of thought, and my observation has led me to the conclusion that there are two kinds of honey-dew—one is the exudation of insects, and the other is caused by the conditions of the atmosphere, and falls as dew from the heavens. So thoroly am I convinced of this that I am astonisht that a man so well informed as Prof. Cook should not know that there are two substances called "honey-dew."

The exudation of insects is a filthy sweet, not fit for man or bees, and when there is plenty of it, and no genuine honey-dew, the bees will deposit a lot of this worthless stuff; but if there is a good fall of honey-dew, the bees will leave this bug-juice and gather what is called a good honey-flow. This genuine honey-dew is clear as crystal; I have seen it hang in great drops on the blades of grass. We used to get our best clothes spoiled with it when we went thru the grass to Sunday-school when we were children. I have also seen it on the bunch-grass on the plains, and I have seen the cattle that run at large on the prairies with their horns all gummed and daubed over with honey-dew in great profusion where there were no trees to climb, and no aphids to be found—nothing in all the scope for them to subsist on.

This honey-dew makes the best of honey. A test will prove that it will candy quicker, and be whiter than the exudation of insects. Atmospheric conditions may occur when there is an abundance of insect exudation, and the two may be mixt. But at the same time the genuine honey-dew may be found where no aphids or honey-exuding insects exist. The exudings of insects are odorous, while the genuine honey-dew is not, unless perfumed from the fragrance of flowers. It is the condition of the atmosphere that causes nectar to secrete in flowers; the same conditions cause honey-dew to fall.

Volumes may be written on the best kinds of honey-plants, but all fail to secrete nectar unless the proper conditions of the atmosphere are at hand. How often do we hear complaints that there was no nectar secreted in the white clover, or in the basswood bloom; and I have even read of sweet clover failing to secrete nectar. The flowers of all honey-producing plants are susceptible of secreting nectar when the conditions are present. Some are more susceptible than others. Thus we have our best honey-flow one season from one flower, and sometimes from another flower, owing to the congenial conditions for the one flower or for the other.

We must look above the trees for our blessings. Is it not just as reasonable that honey-dew is a result of the conditions of atmosphere, as it is for the elements to be full of malaria or of some epidemic? S. W. MAXEY.

Kittitas Co., Wash.

I have heard and read a good deal about honey-dew lately, so thinks I, I'll keep mum, those other fellows having said enough concerning it. But after reading Mr. Nash's article, on page 98, and tussling and gurgling it for awhile, it failed to go down. He thinks Prof. Cook is wrong about his statement, that honey-dew is deposited by insects or bee-lice, as we call them here.

Again, he says some facetious writer calls it "bug-juice." 'Tis naught else but bug-juice, pure and simple. I have had experience with it some six or seven years, and have never failed to see the little fellow that makes the juice. But 1898 capt the climax. In the spring we get a few sections of it from extra-strong colonies, but last year I received between five or six hundred sections filled with honey-dew. Some people even go so far as to think, or say, that this filthy stuff comes from heaven. Had the promist land flowed with milk and this kind of honey, our forefathers would have gone to the "Himmels" pretty quick.

These insects, or tree-lice, are mostly found in spring on the plum-trees after fruit is set, and, if not taken care of very soon, will ruin both tree and fruit. They are almost always on the underside of the leaves. (That is the reason why this honey is always on the upperside of the leaves and not on the underside.) I have seen them so numerous as to cover both branches and leaves completely from stem to stem, and if disturbed would give you a small shower-bath. But last year they were just as numerous on both the hickory and black oak. The underside of the leaves would be covered with small lumps resembling warts, and on being broken open would contain a small larva of these insects, which lie dormant until warm weather of spring hatches them.

Another peculiarity about honey-dew is this: Bees will not work much on anything else when they can get this stuff. We had about as much sweet clover in 1898 as the season before, but nary a bit of sweet clover honey did we get. Bees that have not been fed in the fall, or those wintered in small hives without protection, have surely "gone up," as the cold has been very severe here, bees not having a flight in six weeks.

I do not want to cross swords with Mr. Nash concerning his article. Maybe trees do sometimes have a "sweating spell," but I have failed to see them in such a sweat without having good reasons to do so.

Cook Co., Ill. PETER J. SCHARTZ.

Rendering Beeswax—How Loss May be Avoided.

BY I. W. BECKWITH.

WHEN the comb is new, and especially when it contains honey, and the weather is hot, there is probably no better method of rendering it into wax than by the use of the solar extractor; but with the conditions reverst, the solar is "no good." In my experience with old, black comb I get little or no wax in this way; it being nearly all left in the residue, which, on getting cold, is as solid and hard as a lump of wax. One writer, I think it is Dr. J. P. H. Brown, of Georgia, says he thinks it is no loss to have this wax left in the refuse, because it makes such good fuel. It seems to me that wax at 25 cents a pound is rather expensive fuel; besides, the waste will burn just as

well without the wax; and as that from the solar extractor is nearly half wax, I propose to tell how to save it.

For a press I take two pieces of 2-inch plank 10 inches wide, and 3 feet or more in length, and cut them into the shape shown in the accompanying engraving. In the lower plank, near the wide end, I make a hole 2x3 inches in size, and across it string 6 or 8 wires, fastening them with nails or staples. Now lay one plank on the other, with some sticks between to hold them about ¾ of an inch apart, and hinge them together with a pair of 6-inch strap hinges, bending the hinges to fit. Tack a 6-inch piece of cloth around the wide end of the upper piece, letting it extend up as far as the narrow portion. This is to catch the wax that otherwise might fly out and soil clothing, furniture, etc. This cloth is not shown in the picture, as it interfered with a clear view of the press.

Get a tub—one 10 inches deep cut from the end of a barrel will answer—fasten a bar across it 3 inches from the top and 6 inches from one side. Put the lower end of the press on this bar, and the other end on some object that will raise

Rendering Beeswax.

it off the edge of the tub. Throw the upper handle back against the wall or some other object. Soak the tub, and have a little water in it. Warm the press just before using by pouring hot water on the inside faces. Make a strainer-holder of a piece of No. 6 wire fastened to the tub, so that the top-ends will be about 6 inches apart and 8 inches above the top of the tub. Make a sack-strainer 9 inches wide and 16 inches deep of some strong stuff—I use a piece of seamless grain-sack.

The method of operation is as follows: Put a boiler containing a pail of water on the kitchen stove; and when it boils make the fire as hot as you well can; then stir in comb as fast as it will melt, but not much faster, continuing to do this for about 15 minutes. Let it stand, stirring often, and when it boils freely set it by the side of the tub next to the strainer-holder. Hang the strainer on the holder, hold it open with the left hand, and fill ¼ to ½ full. The more liquid wax it contains the greater the quantity that can be put in. There is not much gained, however, by putting in a large quantity, while it increases the danger of bursting the sack. Lay the strainer on the press with the bottom end next to the hinges, fold the top end back on the filled part, then bring down the handle and put your weight on it if you are not very heavy. As soon as the wax is nearly done running, dip your fingers in cold water, throw back the handle, lift the edge of the strainer which is toward you, fold it back on itself, and bring down the handle again. Throw back again, turn the strainer one-fourth round, fold back and press again; each time making the fold as even in the center as you can. You will now have a "cheese" about 4 or 5 inches square, perhaps an inch thick, and in four equal layers.

If you have done your work well you will now have *no* wax in the residue; which will shake out almost like dry meal; while the strainer will be entirely free from wax except at the edges. If you have *cookt it too long* the cocoons will have become so viscid that when you bring pressure to bear they will stick to the strainer like a mass of glue, and you can get nothing from it. I think the greatest reason why rendering wax by boiling is not more popular is that it is generally *cookt too long;* so, keep the fire hot, and cook only a short time. If the contents of the boiler are likely to become too cold while you are straining, put it back on the stove while you press; but you should not be more than two minutes filling and pressing a strainer full.

Don't put the hinges too near the corners, since the pressure is mostly near the middle, or you will be liable to split the plank.

Don't put much heavy comb in the boiler at one time, and leave it without stirring, or it will be liable to burn and so color the wax.

Don't put any lumps of wax in the boiler after any comb is in; as the lump will be so long melting that the cocoons will be liable to cook too long.

Save all the residuum from the solar extractor, and, at the end of the season, chop it very fine, boil it, and then run it thru the press. The blackest comb will make almost as light-colored wax as will the lightest combs, if it is not cookt too long.

Dr. Miller, in reply to the question, "How can I keep the wax from sticking to a wooden mold?" replied, "Wet the mold." I will inform the Doctor that no amount of wetting or soaking will keep the wax from sticking if the wax is put into the mold very hot, and then cooled slowly; as the hot wax will drive all the moisture from the surface of the wood, leaving it dry, and then the wax will stick.

The Doctor has also told us to cool the caking wax in any vessel very slowly to prevent its cracking near the edges. When convenient I set the vessel of caking wax into ice-water, and if it shows a tendency to crack, as it seldom does, I run a thin knifeblade between the wax and the tin, cutting no deeper than ½ inch, and have no more trouble.—Bee-Keepers' Review. Fremont Co., Wyo.

An Experiment in Producing Extracted Honey.

BY C. DAVENPORT.

AS most of the readers of the American Bee Journal probably know, I make a speciality of comb honey, but I have the last few years run a number of colonies for extracted, and perhaps the results of another experiment in this line which was conducted last season may be of interest to some.

Early in the spring, 30 colonies in good condition, all in 8-frame hives, were selected. They were divided into three lots of 10 each. In lot No. 1 the queens were confined by zinc to the lower story; in lot No. 2 they were allowed two stories for brood-rearing; while lot No. 3 had no restriction in the way of zinc, the queens being allowed their will in three or four stories. Perhaps I should say that with all, the upper stories were of full depth, and were placed on top instead of under the brood-nest, care being taken to give these upper stories as fast as they could be occupied, so that in lot No. 3 the queens had unlimited room for brood-rearing thru the entire season; and while lots Nos. 1 and 2 were confined to one and two stories for brood-rearing, they had all the drawn combs they required for storage.

The flow from miscellaneous sources in the spring was sufficient to keep up brood-rearing, and the weather on the whole was more favorable than the average of springs here. I do not remember ever having colonies in better condition in the spring than they were last season.

The flow from clover opened and continued in a scant, irregular way for about two weeks, when basswood commenced to yield. This basswood flow was at no time very profuse, and clover and basswood were both workt at the same time—something that seldom occurs here, for usually when basswood commences to yield everything else is largely forsaken for it.

An interesting thing to note about basswood is its different characteristics in different localities of about the same latitude. Mr. Doolittle says in his locality he never knew it to fail to yield considerable honey, while last year was the first basswood honey here, so far as surplus was concerned, for three years; and it not only fails to blossom here, but I have seen the trees literally loaded with bloom when it would fail to yield, and while there have been many theories advanced to account for this, I believe there is some reason or cause as yet unknown, for I have known it to

yield well some years, where in others, with apparently the same climatic and atmospheric conditions, it would be an entire failure. But while basswood often fails, it may be of interest to state that there was never a failure from all sources known in this section. The late Mr. B. Taylor, who was engaged in bee-keeping in the southern part of this State for over 25 years, reported, I believe, that about 50 pounds per colony was the smallest crop of comb honey he ever had. I have not done as well as this myself, but I have never failed to get each season from some source what might be called a paying crop.

An incident somewhat curious in this connection occurred a few years ago. That season, if I remember rightly, the yield from both clover and basswood was light, but later a large amount of light surplus honey was secured from a species of sunflower. This plant was described and illustrated some time ago in Gleanings in connection with a description of a visit the editor made to Wisconsin.

The season I have mentioned, this plant blossomed here in great profusion, and seemed to yield nearly equal to basswood, but altho it blooms here more or less each season, I never knew it to yield much in the way of surplus before or since.

Of the 10 colonies which composed lot No. 1, and in which the queens were confined to one story, 7 swarmed; of the 10 comprising lot No. 2, in which the queens were allowed two stories, 6 swarmed; and in lot No. 3, where the queens had unlimited room, there was no swarming. Nothing to prevent swarming was done with any of them, except in the way of ventilation and shade, and all were treated about equally in this respect.

From lot No. 1 about 500 pounds of white clover and basswood honey was extracted. About the time of the last extracting the indications were that there would be no fall honey, so in order to avoid feeding, if this was the case, as it turned out to be, enough honey was left in the frames of each colony in all three lots to carry them over to the following spring.

From lot No. 2 about 175 pounds was obtained. Those in lot No. 3 were only able to spare about 150 pounds, all told. No increase was allowed, for the working-force of all colonies that swarmed was kept together, and the two finally merged into one again; and in lots Nos. 1 and 2, in which swarming occurred, there was a small amount in the way of wax to be added in their favor; aside from this it will be noticed that the colonies that had their queens confined to one story yielded considerable over three times as much surplus per colony as did those whose queens had unlimited room. The matter is explained by the fact that eight frames were about all the queens, on an average, could keep full of brood and eggs in time for them to develop into field-bees for the main-flow. Later an immense force of bees was reared by those colonies that had more room, and these thousands of extra bees per colony were reared from, and had mostly to live upon, what the lesser force were able to gather during the flow.

Here I would like to say that I have never said, or at least never intended what I have written to mean, as some have since claimed, that the average of queens could not keep more than eight frames filled. What I did say, or intended, was *at the right time;* and by this I mean so that the brood and eggs will develop into bees that will be of service in securing the main harvest. A force of bees reared out of season to be of value as field-bees, in excess of what is required for the welfare of the colony, are a large factor in reducing the amount of surplus; and in my opinion this matter is not given the consideration its great importance should insure it. But it is no more than fair for me to say that it is very seldom that the conditions of a season here would be as favorable to, and allow, such an immense advantage to be shown in favor of a single brood story, for we had a great drouth here the latter part of the season, and nothing much was secured after basswood. While it is no uncommon thing not to get any surplus fall honey, I never before remember when at least some was not stored in the brood-nests, and if this had been the case last season more white honey could have been taken from lots Nos. 2 and 3.

Another thing that perhaps I should say is, that on account of the colonies comprising these two lots being stronger in bees, I considered it necessary to leave, on an average, probably seven pounds more per colony than in lot No. 1.

In giving the different amounts of surplus from each lot, I have said "about" instead of giving the exact amount. This is for the reason that it was measured instead of being weighed; but the amounts would vary but a few pounds either way from the figures given.

Before closing, it may be better to mention for the benefit of beginners, that it would not have been a difficult matter to handle the swarms from lots Nos. 1 and 2 in such a way that the results would have been as much in favor of lot No. 3 as it is against it. As I have said, with the colonies that swarmed, the entire working force was kept together. If they had been allowed to divide up and increase, the results would of course have been altogether different. While this swarming made extra work with two lots in which it occurred, it was but little more than that of handling and looking for surplus honey in two or three stories containing more or less brood, and the other work that this entailed. I would like to explain just how those swarms were treated, but the space I am allowed forbids.

Southern Minnesota.

The Spring Management of Bees, Etc.

BY C. P. DADANT.

[Continued from page 165.]

In the previous article I called the attention of the reader to the necessity of great caution in feeding. It is worthy of notice that the excitement, which I have mentioned, does not continue as intense if feeding is practiced regularly with certain colonies. The bee is a very sagacious insect, and very soon discovers in what manner the food comes. Fed for a few days in succession in a certain spot, a colony of bees will thereafter expect the food in the same manner, at the same hour, and in the same spot. The excitement diminishes and the danger likewise.

Now as to the effect: Bees fed with combs of sealed honey will use this honey sparingly, just as if it had been their own crop. But when fed with liquid food, especially warm food, the effect is the same as that of a honey crop. It entices them to breed. Each bee, as it carries its load from the feeder to the cell, seems to impart the news to all it meets. The honey-sacs are all more or less loaded with the welcome sweet, and the queen is offered more food than otherwise. So her laying propensity is increast just as much, and in the same way, as that of the barnyard hen when the winter's manure is thawing out.

If too much food is given, the bees will store it in the cells, and fill them up unduly. So this also must be guarded against. We are feeding only for breeding, and must leave the room for brood. All we need is to make the bees feel that they have a sufficient supply to encourage them to continue their breeding. If the hive is well sheltered, and the space is adequate to the present needs, there is no need of fear of chilled brood.

The feed given must not be as thick as the winter food, and if honey is used it is advisable to add a small quantity of water. We all know that the bees need more water when feeding brood on old honey than on fresh nectar; and I believe that thin food, if not unreasonably thin, will induce more rapid breeding and require less trips for water. The water-hunting, in my opinion, is responsible for more spring losses than any other item, unless it be actual want of food.

As our colony grows and becomes more populous, the queen will enlarge her circle and more combs will have to be added to the room of each weak colony. Here, again, discernment must be used. If too many combs are given at one time, and if some of them are placed between the brood-combs, some risk may be run of chilling the brood. This is the most dangerous practice, and I believe more objections have been raised against the spring forcing of bees from this practice than from any other. Yet, if the weather is good, and the thing is not overdone, I know that something may be gained by placing empty combs between combs of brood. The outside combs usually contain pollen and honey, and act as a partition-wall when dry combs are placed beyond. If the queen goes to these empty combs, her brood is practically divided in two, and she will often be compelled to delay her laying in those combs, owing to this objection. But if the last comb of honey and pollen is drawn outward, and the empty comb placed between two combs of brood, she will readily fill it with eggs. The apiarist is thus called upon to judge, by the strength of the colony, the number of bees, and the age of the brood, whether he may safely increase the space.

If things are carefully done and a vigilant eye kept over the hives, this method is by far the most successful. The populous hives themselves may be made much more service-

able to the apiarist with a little timely feeding. Some of my readers may have occasionally noticed in the spring a colony or two in any apiary running over with bees, and fairly roaring with activity while the others are only slowly progressing. A close watch would have shown you that these two or three colonies have had a little extra feed in the shape of stores from deceast colonies whose condition had not been perceived in time to prevent the strong ones from robbing the little honey remaining in their combs. If such accidental feeding is productive of so wonderful results, what may not be achieved by judicious provision?

But in spring management, such as I have described, I repeat it, much discernment must be used. It is only the careful man who will succeed by constancy and perseverance; but his success will be gratifying when he compares his results with those of his more careless neighbor.

As to question No. 2, in Mr. Gray's inquiry, I would advise to use the full combs on which to hive swarms, and the foundation for the extracting-story, if a choice is to be made. In hiving a swarm on sheets of foundation there is always more or less danger of its being pulled down by the weight of the bees, before it is fairly fastened at the top; while in producing honey the bees gradually occupy the combs and have ample time to fasten the edges to the wood before loading them with honey.

For extracting-supers we use combs only six inches in depth, and have never had any trouble in using foundation for this purpose. We would not alternate built combs with foundation except where an additional brood-comb is accidentally required, because it usually happens that the bees lengthen out the combs while also building the foundation, and the one becomes out of proportion in thickness to the other.

Hancock Co., Ill.

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 163.]

The question-box was then taken up by Dr. Miller, as follows:

WAX-SCALES IN FRONT OF A HIVE.

QUES.—I have noticed a considerable quantity of wax-scales, like sawdust, before each hive—what is the reason for it, and of what import?

Dr. Miller—I remember very distinctly the time when I went off some little distance to ask that question of a neighbor; I was somewhat exercised over it. One thing you will notice, if the bees have not been disturbed, you will find it in streaks along under the frames in rows. In Germany they take that, carefully sift it, melt it up and get what wax they can; we don't do it in this country; the Germans are much more careful about saving anything than we; it is simply cappings and remains that are thrown down by the bees.

HANDLING BEES ON A HOUSE-ROOF—FOUL BROOD.

QUES.—What is the best method of handling bees in a city on the roof of a house? What number of colonies would be the most profitable?

Dr. Miller—C. F. Muth, who unfortunately committed suicide not long ago, possibly had more experience in that line than any other man in the country. I don't know that the handling of bees in his case was any different from what it would have been on the ground. There are some things that make a difference, for instance, the swarms—and I would like to know more particularly what the questioner had in mind. When an apiary is kept on the house-top, for instance in the city as Mr. Muth's was, it would not be so convenient for him to have them swarm, and perhaps a little different practice would be used in that respect. Let me see, how many are there here who have had experience with bees on housetops? I don't see any hands. I should certainly have all queens' wings clipt. I should take the same course as with the bees on the ground.

Hundreds of colonies might be kept in one apiary in some places; and perhaps it might not be profitable to keep more than a small number for lack of pasturage in some places and some States. Chicago is one of the best cities, where its suburbs give so much sweet clover, and perhaps a hundred colonies might be kept. I don't believe you would feel very safe in going over that. Perhaps not over 75.

QUES.—Are bees in any particular climate affected by foul brood more than another?

Dr. Miller—So far as I know foul brood will work in any climate, and it is not a new thing by any means, altho with a great number of bee-keepers perhaps it is a new topic and a new subject, yet there is nothing very new about it. It has existed for many years, and I don't know when the disease came; I know that more than a hundred years ago it was well known.

BEE-KEEPING IN TOWNS AND VILLAGES.

QUES.—Is it advisable to encourage bee-keeping in towns and villages?

Dr. Miller—What is bee-keeping for? Two things—getting the honey, that is one thing; that is not the main thing. The main intention, I suppose, for which God created bees, was to have them fertilize the flowers, and wherever there are flowers of a kind that need fertilizing by bees, there it is a good thing to have bees kept. They are in towns, and about towns as well. I should say it is a good thing to encourage the keeping of bees in towns and cities, everywhere: from a selfish standpoint I should say, "No, I don't want everybody to keep bees; I want to have a monopoly of the honey-trade." But when you come right down to it, the greatest good for the greatest number, bees should be scattered all over the country wherever flowers are, to fertilize them, and this includes towns and villages. It is the same in villages and towns, precisely the same as it is everywhere else; it is desirable for the sake of the fertilization of the flowers to have enough bees everywhere to do that work; it is also desirable to have everywhere enough bees to secure nectar that would otherwise go to waste. Now, there you have the whole thing; there is that nectar that would go to waste if there were not enough bees to gather it, so it is desirable to have enough bees to get it.

HOW MANY COLONIES IN ONE APIARY?

QUES.—How many colonies can profitably be kept in one apiary in a city or town?

Dr. Miller—Just the same as elsewhere. You can tell something about it, but it's hard to know for certain; every now and then some one will say that there can be three or four hundred kept in a place. I remember a gentleman a few years ago; I was very much interested in watching him; he said he was going to keep so many colonies, naming about twice as many as I felt safe in keeping, but he was unsuccessful. It is like anything else, you must go according to your pasturage. One man in California has kept 600 colonies in one place; it is possible he might do better with 500; it is one of the things you don't know about. I might have 100 colonies and not get as much honey as if I had only 80 or 90. The next year it may be a better season, and 110 will do just as well as 100; you see how it is; if you live a thousand years you will know more about it than you do now; it is very difficult to tell in a city or town; it may be that it is just exactly the same thing in the country; it may be a little different; it depends upon the pasturage. If there is any one that has any definite knowledge about this, we would be very glad to hear. Mr. Kreutzinger, can you tell us how many colonies can be kept in one place?

Mr. Kreutzinger—It depends; I have had 114 in one place; 84 have done better. I find that around Chicago (Cook county especially) there is plenty of sweet clover—100 colonies can be kept in one place safely; other places where there is only white clover which is to be depended upon every year, I would rather recommend 80 colonies, no more; in other places where basswood is you can have a thousand colonies in one place.

IS COOK COUNTY OVERSTOCKT?

QUES.—Is Cook county, Illinois, overcrowded with bee-keepers?

Dr. Miller—That is not a question for me to answer; I don't know how many bee-keepers there are in Cook county; it will bear a very large number of bee-keepres.

Mr. Moore—There are about 150 persons keeping bees in Cook county.

Dr. Miller—If there are as many as 200 there are probably as many as the ground will stand; a man can't keep a very large number of bees; if he cares for the money return he becomes a little discouraged if he can't increase and have a larger number. I should think Cook county differs very much from other counties, because there being so much larger population there is a larger number of people who will be interested in bee-keeping and entirely inde-

pendent of the money return in it; you will find amongst so large a number of people as are in Cook county, here and there a man who cares so much for the thing that he would keep perhaps a half dozen colonies to study, even if he had to pay for the privilege of keeping them and give away the honey besides. Perhaps I am inferring there is a little too much enthusiasm on the subject. In my own case, altho I have kept bees for more than a third of a century, if it cost me something to keep them I would not be without a few colonies on account of the interest I have in bees. You will never find the time to come when there are not some new questions and problems to study over; at least it has not been so up to 1898; I don't know what 1900 will bring. I should say that Cook county is not overdone with bee-keepers. I think likely there is some danger of the ground being overstockt with bees if there are 200 bee-keepers, or even 150, and each one should keep a considerable number of bees; there is some danger in that direction.

PROTECTION AGAINST OVERSTOCKING WITH BEES.

QUES.—What protection can a bee-keeper get against another bee-keeper coming into a locality already overstockt with bees? In my neighborhood we are well stockt. Last spring a Chicago bee-keeper moved several colonies of bees within a few blocks of my apiary, which were neglected so much during swarming-time that small clusters could be found on bushes and under sidewalks. Do you think such careless management will cause the public to get laws prohibiting bee-keepers from keeping bees within the city limits? Within a circle of 1½ miles from my apiary I have located 172 colonies of bees. What protection can a bee-keeper get when overstockt with bees?

Dr. Miller—So far as I know there is positively no protection he can get at all from existing laws. There is a moral protection he may have if his neighbor is an intelligent person. If the locality is already overstockt an intelligent bee-keeper would hardly want to go into that locality for two reasons: In the first place, on account of his selfish interests, and, in the second, out of respect for those who already occupy the ground. There is first and last a good deal said about intruding upon territory already occupied, and there is a moral side to the question, so that it is generally considered that a man, if he is well informed and of good principles, will not want to go into a locality already fully occupied. It is damaging to him and to those already on the ground. A wise man will desire to find a field unoccupied; however, things of this kind will sometimes occur, and I don't know of anything that will help the case except to try to talk to a man and inform him.

A Member—I would suggest an injunction.

Dr. Miller—That won't count; can't do it. If you have the place, and have say 100 colonies of bees, and that 100 colonies fully occupies the field, and I can buy or rent a lot of ground within 10 rods of you, I can put my bees down there and you can't help yourself.

Mr. Moore—By the way, Dr. Miller, I had a notion to break in at the start and ask if this is not a sore spot. There has been some pretty lively discussion between yourself and others, and the editor of Gleanings.

Dr. Miller—No; Gleanings' editor has been almost always on my side.

Mr. Moore—You took the ground that a man had a sort of a vested right if he got there first.

Dr. Miller—All agree on that. If you have the ground already occupied it is a mean thing for me to come in and "fish in your hole," as the fisherman says; that is the way it stands; all agree on that. I believe the time might come when it would be a desirable thing if in some way I could secure a certain territory where I know that no one will come in and intrude upon me.

Mr. Moore—Some one has askt the question, "Does a man when he deeds 600 acres of land deed the bee-pasturage?" It was answered that he deeds the land, and he does not give any title whatever to the nectar in the flowers, but the time will come when he can buy the nectar on 600 acres by paying for it.

Dr. Miller—I am afraid I said that; nobody in this world would be foolish enough to say that but me. Prof. Cook once said, "This much is certain, that you can't hold the nectar; it belongs to the public."

Dr. Miller—Another question is involved: Do you think such careless management will cause the public to get laws prohibiting bee-keepers from keeping bees within city limits? Certainly, bee-keepers should not keep bees where they may disturb others. We should be exceedingly careful. While I may have the legal right to keep my bees within so short a distance of another man's house that they will make trouble for him I have not the moral right, and I am very foolish if I do it. It is a great deal easier to *keep* out of trouble than to *get* out of trouble. You should be exceedingly careful not to do anything in that line that will make trouble for others.

DISTANCE TO KEEP BEES FROM HIGHWAY.

QUES.—Would a law governing distance from public highways to which bees could be kept be beneficial to bee-keepers?

Dr. Miller—I somewhat doubt that. They have some laws in the old country with regard to it. It is possible that it would be in some cases a good thing, but there is so much good common-sense in this country I very much doubt whether a law of that kind is needed.

BEST HIVE FOR WINTERING OUT-DOORS.

QUES.—What is the best hive to winter out-of-doors in Cook county?

Dr. Miller—I don't know, and if you commence talking about that you will spend all of your time. Here is a man who is certain that his hive is the very best in the world; and another who knows his is worth three of the other man's, and so on. If you have had success with a hive, that is the hive for you, and it is quite possible that what you have done the best with may not be the best hive for me to winter bees out-doors.

WINTERING OUT-DOORS OR IN THE CELLAR.

QUES.—How many Cook county bee-keepers winter their bees out-doors?

Dr. Miller—How many winter their bees out-doors? [16.]

Mr. Kreutzinger—I am keeping my bees in a shed specially constructed. I used to keep them in the cellar, but somehow water got in.

Dr. Miller—I would like to hear from some of the rest who don't keep their bees out-doors, and don't keep them in the cellar?

Mr. Doerr—I winter my bees in a specially-constructed bee-house, made of one-inch lumber.

Dr. Miller—I suppose that would be counted out-doors? How many keep your bees out-doors all the year around, thru the winter just the same as in summer? [2.] Tell us about how many you winter, Mr. Goelet.

Mr. Goelet—23.

Dr. Miller—How many thru the season?

Mr. Goelet—21.

Dr. Miller—Will you tell us whether there is anything to protect them particularly from the winds all the year around?

Mr. Goelet—I have them fairly well guarded from the north wind, alongside a big fence. I have double hives packt with sawdust.

Dr. Miller—You keep them packt winter and summer?

Mr. Goelet—Yes.

INTRODUCING VIRGIN QUEEN TO QUEENLESS COLONY.

QUES.—What is the quickest way to introduce a virgin queen into a colony that has been queenless for several days?

A Member—I just drop the queen in on the combs, and have never lost one.

Dr. Miller—There is a possibility that next time you do that the queen will be a dead one. Don't count too much on that; if you have done it 147 times and never lost a queen you might feel pretty safe, but I would not consider you would always be safe if a colony has been queenless for several days. I will tell you one of the things that may make a difference—the time of day you do it; if you do it in the evening you will be a good deal safer than in the middle of the day. In the evening there are no other bees flying around. If you try it when no honey is coming in you will jeopardize your queen. Another thing is the age of the queen. You said, "I just drop them in on the combs and have never lost one." I don't believe you will if you drop them in while they are so young that they have just come out of the cell; a young queen is not treated by the workers as the older queen is; they don't seem to think there is anything they need care for. Let a laying queen drop in and the bees will attack her at once.

[Continued next week.]

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[Questions may be mailed to the Bee Journal, or to Dr. Miller direct.]

A Mammoth Red Clover Correction.

On page 87 I said that mammoth red clover blossoms at the same time as the other. It seems that I did not know what I was talking about. I am indebted to Hon. R. L. Taylor for the following correction in the Bee-Keepers' Review:

"In this locality the mammoth clover blossoms two to four weeks later than the June clover—so much later that the first crop bears the seed; while June clover blossoms so early that, on account of the scarcity of appropriate insects to fertilize the blossoms, the first crop yields no seed. Again, there is seldom much, if any, second crop of mammoth clover; and, hence, very little fall bloom; while, under favorable circumstances, the June clover yields a good second crop well filled with seed."

Evidence of a Mouse in the Hive.

I send a sample of stuff I pulled out of one of my hives. I pulled out about a pint March 2. I examined the hive last Saturday (March 4) and pulled out about a pint more of the same stuff, and found that the bees had cut considerable from the bottom of five combs. This is the only one of my 11 colonies in which the bees have done this. I thought at first that the mice had a hand in this, but there is no way for the mice to get into the hives. What is the cause, and how can I prevent it, if any harm is being done?

ILLINOIS.

ANSWER.—Mice. Sure. The sample sent is made up of pieces of comb smelling very sweet and nice, some of them ¼ to ½ inch in size. If the work was done by the bees the pieces would be more nearly the size of ground coffee. You say "there is no way for the mice to get into the hive." Probably not. Neither is there any way for the mouse or mice to get out that are in there, and you probably shut the hive mouse-tight when a little fellow was in there, chuckling to himself how he had outwitted you. It is possible that you closed your hives at a time when it was cold enough for the bees to suffer a mouse in the hive without protest. The first day they can fly they will likely dispatch Mr. Mouse, unless you open the hive so he can get out of the way.

Bees on a Block—Facing Hives.

1. I wish to know how I can remove bees from a pine block three feet long. I found them in a tree and sawed them out, and wish to get them into a hive.

2. I have another hive that is packt in chaff, extra outside three inches thick of chaff, except the front. On Thursday it was warm, and they came out and seemed to be greatly disturbed; they dropt on the snow and were chilled, and remained on the snow. Is it right for them to come out?

3. This hive is facing south. Should it face to the east?

ONTARIO.

ANSWERS.—1. The only difference between this case and transferring from a box-hive as described in your textbook is the matter of splitting the wood. Stand the block on end upside down, and split off part at one side and then at the other side. Don't split off a piece where several combs are fastened to it, but try to take a place where two or three combs will come away with the piece split off. It may also do to split right through the middle, choosing such a spot that the combs will separate without breaking.

2. The excitement on flying after a long confinement is entirely natural, and unless the number that fell on the snow was large no great harm will come of it. It might have been a good thing if you had beaten down the snow in front of the hive. It's a good thing for them to have a flight.

3. I don't really know which is best. Some say south, some say east. When facing south the bees get the sun at the hottest time of the day. But some object to that in warm weather, because the bees will have such a hot place to cluster in front. You can get over that by raising the hive half an inch or more when hot weather comes, then the bees can cluster on any side of the hive they like. I'd rather manage so as not to have them cluster out on either side.

Moving Bees a Short Distance—Transferring—Square Frame.

1. I have my bees on the winter stands, and wish to move them back about 50 feet, and 100 feet to the west of where they stand. When is the best time, and how? Is it not in March?

2. I also have one box-hive colony which I intend to transfer into the Langstroth hive. How am I to go about it, and when? Would it be better to move it first, or transfer on the old stand?

3. What kind of a hive is it that has frames 12x12 inches, running crosswise?

OHIO.

ANSWERS.—1. If they are not packt so that moving would leave them without packing, then you may as well move them the first warm spell. After moving, put a board in front of each hive so as to make the bees bump against it in coming out. That will help to make them mark their location. Don't leave any hives, stands, or anything on the old location that will make it look like home to them. The more different the old place looks the better. Sometimes, however, some bees will persist in clinging to the old spot, in spite of all you may do. In that case it may be advisable to place for them a hive containing a few combs for them to cluster on, then in the evening carry these bees to some colony that is not very strong, repeating it next day or so, if necessary. If moving necessitates unpacking without packing again, then it may be well to wait two or three weeks later, even if a little more inconvenient.

2. You'll find instructions for transferring in your textbook, and you will do well to move early and not transfer till fruit-bloom, unless you prefer to wait till three weeks after swarming—a plan that seems to be growing in favor.

3. I don't know. Perhaps American.

Odd Size Frame—Foundation for Brood-Chamber—Bees Dying.

1. My bees are in hives which contain 11 frames, the size of each frame, inside measurement, being 9½x12 inches. Do you think this too large for producing comb honey? If so, what size would you use?

2. Which kind of foundation is best to be used in the brood-chamber—drawn, heavy, or brood-foundation?

3. Yesterday (Feb. 18) was warm, and the bees were nearly all out for a cleansing flight, I suppose. After they were thru flying I noticed a large number of dead bees in front of one hive. I cleaned these away and in a short time there were nearly as many more. I concluded to watch them, and for nearly an hour they continued to come out of the hive, run around for a minute or two, and then die. They were all worker-bees, and fully grown. I am sure they were killed by the bees in the hive, but *why* I don't know. Can you give me any information about it?

NEW YORK.

ANSWERS.—1. No, not too large, but it's an odd size, and if you haven't so many that it will be difficult to change, you will do well to adopt the standard size, 17⅝x9⅛, outside measure.

2. You will probably be suited with either medium or light brood. The light is more economical, the medium less inclined to sag or warp. Supported by wires or little sticks, the light will be all right.

3. A good many bees die through the winter, and will be carried out when bees have a cleansing flight. But you say the bees came out and died after running around a minute or two, which looks as if some weak "hunger-swarm" had entered, and the intruders were dispatcht by the bees of the colony.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. MARCH 23, 1899. NO. 12.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

New York to the Front.—Pres. Marks' address, as reported in the American Bee-Keeper, shows that the State Association is making real progress. The State department of agriculture has stipulated to set aside a small fund to aid in the interchange of ideas among the bee-keepers and the promotion of apiculture in the State, and it is proposed to hold a series of bee-keepers' meetings throughout the State under the auspices of the Bureau of Farmers' Institutes.

The Union and the Association.—Pres. Doolittle, of the National Bee-Keepers' Union, writes us as follows in reference to our editorial of several weeks ago:

EDITOR YORK:—I take note of what is said on page 130, about "the door open for the Union," and in order that it may be kept *wide open* till the "wedding" is accomplisht, I will quote a few sentences from a letter just received from General Manager Newman, in reply to mine to him of recent date:

"I note what you say about consolidation, and am quite willing that you should undertake the matter and work in your own way to bring it about. I am quite willing to ASSIST in arranging DETAILS as I always have been. No one will be more pleased to have the matter amicably adjusted and the two organizations united for the purpose of doing effective work than will I. I feel that in leaving this matter in your hands it will be properly done."

As I am very favorable to the uniting of the two societies, and as far as I know all those interested are, I do not see why it cannot be accomplisht as soon as the necessary details can be arranged; and who could be better fitted to arrange these details than the general managers of both organizations? I am not posted in this detail work, and am way behind with my work on account of broken bones and sickness, so I hope to be releast from doing more than is actually necessary, that the good work of uniting may go on to completion. But I will do all that is necessarily required of me to keep the "door open" till "the twain are ushered in as one flesh." G. M. DOOLITTLE,

President National Bee-Keepers' Union.

We do not see why all details may not be arranged soon, so that the two national bee-keepers' societies will be under one banner. We suppose that a vote will need to be taken by the Union before a consolidation can take place, but we think no vote is necessary on the part of the Association, as the Board of Directors were empowered to conclude the negotiations whenever the Union decided to cast in her fortunes with those of the Association.

Nebraska State Fair and Exposition.—The State Board of Agriculture and the managers of the Greater America Exposition, after discussion of the subject, have agreed to a plan for holding the Nebraska State Fair within the Exposition grounds at Omaha, the coming fall.

The Greater America Exposition agrees to place at the disposal of the State Board of Agriculture whatever space may be found necessary for a creditable exhibit in the Agricultural, Horticultural, Dairy and Apiary buildings, and to afford proper accommodations for all the live stock that may be placed on exhibition; and to employ such officers as may be mutually agreed upon to superintend the agricultural, horticultural, live stock, dairy and apiary exhibits.

The Exposition directory appropriated $100,000 for the organization of a colonial exhibit, and to send a representative to the Philippine islands at once.

No Honey in Southern California.—General Manager Thomas G. Newman, of the National Bee-Keepers' Union, San Francisco, Calif., writing us March 10, said:

FRIEND YORK:—Here is an item from the San Francisco Daily Chronicle of March 8. It is indeed a dismal outlook for Southern California. Animals on the ranches are starving for want of food; the whole country is a parcht and arid waste, with no verdure to be be seen.

Fraternally, THOMAS G. NEWMAN.

The item referred to by Mr. Newman reads as follows:

LOS ANGELES, March 7.—The bee-keepers of Southern California are much concerned about the continued dry weather. "We shall make nothing this year," said C. H. Clayton, Secretary of the Bee-Keepers' Exchange, to-day. "In good years we have realized as much as 250 carloads of honey from Southern California. Last year only 60 tons were produced, and this year there will be none. The bees are dying off very fast, and many of the bee-keepers will be bankrupt. Fully 50 percent of the bees have died since Jan. 1. No amount of rain could help us now, as far as the honey crop for this year is concerned, tho a good downpour might save some of the bees. I know of only one carload of honey in Southern California. That is being held near Perris. It is from the crop of 1897. It is held at 1¼ cents above the Chicago price."

This is indeed a calamity to the bee-keepers of Southern California. We only wish there was a possible way out of the difficulty, but it seems there is none. It is simply a case of "What can't be cured must be endured." Of course, should there be a good crop of honey in other parts of the country, it will not have to compete with California honey this year. So what is one locality's loss may be another's gain. But there's not much comfort in that thought for our Southern California friends.

The only thing we see for our discouraged friends to do is to draw on that limitless fund that Hon. Eugene Secor once called "the bee-keepers' bank account"—HOPE. But while "living in hopes" let us trust that none may "die in despair."

The Premium offered on page 172 is well worth working for. Look at it.

The Dot Prizes and Langstroth Fund. Finally we have the work completed on the Dot Contest Prizes. All who did not feel like contributing their amounts to the Langstroth Fund will have received them before they get this number of the Bee Journal.

The following are the names of those who gave us permission to add the amounts of their cash prizes to the Langstroth Monument Fund:

Fourteen of the 60-cent Prizes—$8.40.

B. W. Peck	E. D. Lerch	O. Taylor	B. K. Lawlin
John Michaels	Oliver Adcock	Rev. W. Knuf	L. J. Whitney
W. H. Pridgen	Chas. Putman	John F. Logsdon	
H. F. Schultz	H. E. McGregor	R. Lowey	

Sixty-four of the 20-cent Prizes—$12.80.

E. W. Lanier	Jos. J. Giger	L. K. Smith	L. P. Spring
Paul F. Bratz	Wm. Wilson	D. F. Berry	J. P. Blunk
Alonzo Knights	Wm. Daubenspeck	M. S. Snow	Geo. W. Riker
G. L. Good	Edmund Worthen	F. W. Haynes	Julius Herman
E. August Weiss	G. A. C. Clarke	E. Manicke	F. Sauter
N. H. Vogt	G. W. Lawson	F. C. Wiggins	Miletus Sims
Fred Reitman	B. Volkering	Wm. Witkaisky	A. T. Smith
Mrs. M. A. Golden	Stephen Lawson	O. M. Pierson	S. S. Butts
A. J. Fisher	Orville Jones	Edw. Scoggin	Percival Goldin
J. W. Lane	Thos. S. Wallace	H. D. Hill	Wm. Stewart
John L. Walther	Philip Roth	Louis Thill	H. S. Jones
W. Bishop	Jesse Willis	John T. Young	Geo. F. Fall
John K. Frisbee	Allen Lewton	T. J. Green	H. Nootnagel
C. E. Snyder	D. L. Carlton	L. P. Billings	John V. Emmert
Frank Fishell	Carlos Wheeler	Stoughton Cooley	M. S. Patterson
J. D. Moffett	A. H. Kunagy	G. F. Hauder	F. C. Snyder

Forty-three of the 10-cent Prizes—$4.30.

V. W. McNeil	Alfred E. Smith	L. G. Purvis	Wm. J. Healy
J. H. Tait	A. Waddington	H. Lampman	L. Stachelhausen
F. A. Crowell	J. B. Dann	M. McKimmie	E. H. Bridenstine
James McNeill	Lillian E. Trester	Wm. Munch	S. M. Bragdon
Wm. Russell	R. J. Purcell	W. Muth-Rasm's'n	J. F. Merrill
W. I. Copeland	Henry Willson	Ernest W. Doe	L. B. Boardman
Rev. Chas. Horack	J. A. Tidmore	J. A. Munroe	G. F. Sutherland
W. H. Cook	C. Lindblom	Geo. J. Stray	Wm. Robrig
John Kidney	W. E. Owen	Aaron S. Johnson	Jos. Stephenson
F. J. R. Davenport	A. Snideman	Fred Welty	John M. Hunzeker
C. V. Mann	L. C. George	John Rogers	

Thirty-nine of the 5-cent Prizes—$1.95.

Thos. Dougherty	Edward Tanner	Jno. W. Lyell	S. A. Dickson
F. A. Chandler	A. B. Cross	S. D. McClain	O. R. Coe
E. Woodall	Jos. Unterbrink	Mrs. I. D. Harrison	Geo. E. Dudley
F. Mothershead	Harry Brokaw	Frank L. Goss	Frank Coverdale
Alpha Wallace	L. G. Clark	M. F. Hathaway	M. M. Stouffer
W. M. Barnes	A. L. Heim	W. B. McGraw	Wm. N. Sessions
J. B. Ausmus	O. B. Montfort	Jas. Quinn	Jas. A. Stone
Fred D. Gibbons	Wm. Goedker	N. Staple	H. W. Savage
Payne Bros.	G. Schermerhorn	Jos. Ouradnik	E. L. Hayes
C. B. Howard	H. W. Roop	H. C. Roberts	

Then there is a list of 18 extra contributions that we have not reported heretofore, amounting to $13.23, as follows:

Wm. Munch	$ .10	John Stroebel, Jr.	$ .35	L. Kreutzinger	$1.20
L. A. Syverud	.20	C. D. Day	.50	Mrs. N. L. Stow	2.00
N. Staple	.25	A. B. Cross	.50	Lewis J. Whitney	2.00
Wm. Hildebrandt	.25	J. A. Rosson	1.00	John A. Blocher	1.00
C. Harkens	.30	Edw. S. Goudge	1.00		
Wm. Wilson	.30	C. Theilmann	1.00	Total	$13.23
A. J. Fisher	.28	W. A. Alder	1.00		

All the foregoing amounts to $40.68. There are 160 of the Dot Contest contributors, upon which we agreed to add two cents each extra, as we would have been compelled to spend that two cents on each in order to have mailed their several amounts to them. This makes $3.20 more. So the check which we mail Mr. Secor, who has charge of the fund, would be $43.88. No, we will make it an even $50.00, and contribute the difference *ourselves*, tho we have contributed several times before. But a $50.00 check looks so much better than one written for $43.88!

Thirty Poisonous Plants.—Under this title the Department of Agriculture has issued Farmers' Bulletin, No. 86. This is a reproduction, in part, of Bulletin No. 20, of the Division of Botany, sent out in July, 1898, and entitled, "Principal Poisonous Plants of the United States."

The statement is made, by the botanist of the Department, that the publication of that bulletin, instead of satisfying the demand for information on poisonous plants, has increast it, and in order to supply the innumerable requests received since its appearance, it has seemed desirable to republish the information which it contained in a condenst, less expensive, and more popular form. As this Bulletin is distributed free, those wishing it should request it by addressing the Secretary of Agriculture, Washington, D. C.

MR. R. C. AIKIN, President of the Colorado Bee-Keepers' Association, read a paper recently on "Fruit *vs.* Bees," before the Farmers' Institute, which was publisht in the Loveland (Colo.) Register, of March 8. It filled three columns, and of course was an able and interesting production.

* * * * *

EDITOR E. R. ROOT, in Gleanings, had this kind word to say about our new department:

"The department called 'Afterthought,' by 'Cogitator,' now running in the American Bee Journal, is a good one, and is a real addition to the Old Reliable."

* * * * *

THE M. RUMELY COMPANY was establisht 46 years ago, and has been doing business all these years at LaPorte, Ind. The M. Rumely separators and engines are known everywhere for the superiority of their construction and the uniform high quality of their work. They make compound traction engines, portable engines and semi-portable engines. In threshers they manufacture the New Rumely Separator. A full line of Dingee-Woodbury horse-powers, saw-mills of various sizes, and Maurer's Automatic Bailing Presses completes the line. Every article is the complete embodiment of good material, good skill and perfect workmanship. Write them for large illustrated catalog which they will take pleasure in mailing to our readers, if the American Bee Journal is mentioned with the request.

* * * * *

KEROSENE EMULSION IN SPRAYING.—The value of kerosene as a material for spraying has been generally appreciated by horticulturists and others for some time, but the difficulty and uncertainty of preparing and using of the various emulsions of kerosene have prevented its general use. With an eye singly fixt on its value, The Deming Co., of Salem, Ohio, set to work experimenting for a machine that would make its own emulsion while in the act of spraying. The result is the "Weed" Knapsack Kerosene Sprayer, the "Success" Bucket Kerosene Sprayer, and the "Peerless" Barrel Kerosene Sprayer. The great success of these several machines is due to the fact that the force applied in pumping injects just the amount of kerosene desired into the spray in such a manner as to make a perfect emulsion. The amount of kerosene is easily regulated by an indicator on the top of the kerosene tank which controls the percentage of oil. The Deming Co.'s illustrated catalog containing complete formulas for spraying, in addition to descriptions of their very complete line of pumps and nozzles, will be sent on application. Be sure to mention the American Bee Journal when writing them.

* * * * *

DR. PEIRO, when in California last summer, learned something about the Chinamen's bee-keeping, and tells of it in the following:

One has to go from home to study some of the least known characteristics of bee-keeping. The celestial is not so much more removed from the best methods as are some of his brothers with less slant of eye and deprest cheek-bones. But as with others not governed by right ways of bee-keeping, results are equally discouraging.

A Chinaman's bee-yard offers the most variegated assortment of hives that have prevailed the last thousand years—the grass, rope cupola, hollow knot-hole, cracker-box, and beer-keg. Bees of any nationality are alike to John. The poetic Italians have no greater honor shown than the more obstreperous German. To him they all sting alike, and their fiery darts are all equally hot. He carries his fan to cool off excessive temperature, a failure in that direction always being yelled in his peculiarly high key—"Hellee!" which being interpreted in the vernacular means "Fire."

The crop of honey obtained from those arid side-hills in California is small indeed, and attended with great vexation of spirit, but I suppose the flavor is the sweeter for the trouble endured.

DR. PEIRO.

Plain Sections and Fences, says Editor Root, were bought by several thousand of their customers last year, only two calling them a failure, while some others who were not entirely satisfied with them were found to have fences of faulty construction.

Don't Experiment on too Large a Scale, is the advice of G. M. Doolittle. It is needless to sacrifice a whole apiary to an experiment, as some seem to think. On the other hand, don't be too much afraid of experimenting on your own hook.—Gleanings.

To Get a Special Breeding-Queen, Gleanings advises to buy four or five queens at $5.00 or $10.00 each, breed from all and get a composite stock, getting the queens from different breeders so as to avoid in-breeding. Which may be very good advice for those who don't know how to get rid of their money otherwise.

Japanese Bees, according to K. Aoyanagi, in the American Bee-Keeper, are grayish-yellow, becoming darker with age, smaller, gentler, and hardier than Italians. They build white comb with thin walls that does not bear transportation as well as that made by Italians. They work in rainy weather when Italians stay at home.

Threading Instead of Wiring Foundation.—A writer in the British Bee Journal says he uses cotton-thread instead of wire for fastening foundation, letting the thread be opposite on each side and slightly cutting into the foundation. The foundation is drawn out enough to hold it firm before the bees gnaw away the thread. This "needs confirmation."

Importing Queens.—W. A. Gilstrap, of California, reports in Gleanings that last year he imported six queens from Italy. Four died on the way, one was lost in introducing, and the other one absconded with most of the bees several weeks after being introduced. He thinks a trip of 20 days is too trying, and that it is better to buy of importers in the Eastern States.

Large or Small Hives.—In the American Bee-Keeper, A. E. Manum favors both kinds—the large hive for a location with a short honey season, if no increase is wanted and no feeding desired; the small hive for a location with a honey-flow of long duration and the bees run for comb honey by one who gives close attention at all seasons, and also where increase is desired.

The New York Spraying Law, which went into effect July 1, 1898, is given in American Bee-Keeper as follows:

Section 1.—Any person who shall spray with, or apply in any way, poison or any poisonous substances to fruit-trees while the same are in blossom, is guilty of a misdemeanor, punishable by a fine of not less than $10.00 nor more than $50.00.

Section 2.—This act shall take effect July 1, 1898.

How Long After Infection Before Foul Brood is Bad? is a question answered by Wm. McEvoy, in Gleanings. Sometimes in a week, sometimes a year; generally less than three months. Depends upon amount of diseased honey. To become diseased, the honey must be stored in cells where foul brood matter had dried down, then other cells partly filled with sound honey may become infected by honey from the diseased cells.

Bees as Fertilizers.—A bee-keeper gets less fruit from apple and pear trees three miles from any bees than from the home orchard near bees, and G. M. Doolittle advises planting bees nearer than three miles from the dilatory trees. He relates that Gregory, the squash man, tied gauze over the squash-blooms with little squashes at their bases, and invariably the little squashes turned yellow and died. A Kansas Station Bulletin says: "An insufficient supply of bees will hinder the setting of fruit. While other insects may take part in the carrying of pollen, the fruit-raiser must rely chiefly upon honey-bees. Experience shows that tho hungry bees may fly two or three miles, hives should be within half a mile of the orchard or small-fruit patch."—American Bee-Keeper.

Wide Frames, which have been discarded by many, are strongly advocated by G. M. Doolittle in Gleanings. He sees no reason for changing, so long as he gets highest market price and more, having gotten 20 cents last fall in Boston for some of his fancy honey, when it was quoted 14 and 15 cents. Properly constructed wide frames keep sections so clean there is no need of a machine to clean them, and the tin separators he has had in use 20 to 25 years have been cleaned only once.

Strong Colonies for large results, has almost past into an axiom, yet that there are limits must be conceded. In Centralblatt is mentioned a case in which a giant swarm was formed by the uniting of several swarms, until a weight of 13 or 14 pounds was reacht. The season was favorable, all colonies being very heavy in the fall. This giant colony yielded a harvest of 73 pounds of comb honey, but in comparison with others it ought to have yielded 120 pounds. A larger result would in all probability have been attained if the big swarm had been separated in two.

Making Haste Slowly.—In the American Bee Journal for Feb. 2, the editor of the Canadian Bee Journal has his attention called to the fact that he had copied half a page in his journal for January from the British Bee Journal without giving credit. In the Canadian Bee Journal for March the editor says: "We therefore hasten to make the correction," adding that his paper has never been accused of systematic pilfering. The latter statement is true, for his pilfering doesn't seem to be particularly "systematic," but it's a little difficult to understand how he has "hastened to make the correction," when it occurs two months after the omission of credit.

Examining Bees in Spring.—A discussion reported in the Canadian Bee Journal makes it appear desirable not to open too early hives for examination, as the breaking of the sealing leaves the hives cooler afterward. Mark the hives that appear light, so as to supply their wants, then it may not be necessary to disturb the others. But weight alone cannot be depended upon, as was brought out by Mr. Alpaugh. Two colonies may weigh the same—one may be light in bees and have more honey than it needs, while the other, strong in bees, may starve unless fed. The usual difference of opinion prevailed as to the advisability of stimulative feeding in the spring.

"What's the Matter with Holtermann?" is the anxious inquiry of the editor of Gleanings. On page 106 of this journal, in an item giving a statement of the views exprest by Editor Holtermann, of the Canadian Bee Journal, with respect to no-bee-way sections, the following passage occurs:

"At the Toronto exhibition plain sections took no prizes. Sections of the ordinary kind shown there beat the sections shown by Danzenbaker at Buffalo."

The statement in that passage is a very severe infraction of the ninth commandment, if there is no mistake in what is said in Gleanings for March 1. That this Boiler may not be held responsible for misrepresentation, the following quotation gives verbatim the words of the Canadian Bee Journal: "....how is it that at Toronto, London, and Ottawa exhibitions the plain sections did not distinguish themselves by capturing the prizes on comb honey? The comb honey in the plain section was shown at Toronto, but secured nothing."

It appears, however, according to Gleanings, that plain sections were *not* exhibited at Toronto. C. E. Taylor sent some plain sections of honey that he found unopened the last week of the fair in Manager Hill's office, where he opened the lot and showed it to Mr. Holtermann. This being brought to the attention of Mr. Holtermann, he said in his paper:

"Again at Toronto plain sections were entered and sent to the exhibition. I saw them there, but thru an oversight they were not judged."

This does not satisfy the editor of Gleanings, who wants evidently to have Mr. Holtermann say in plain words that plain sections were not on exhibition at Toronto, and had no possible chance to take any prizes. Of course that will be the easiest way out, if it is the truth.

Root's Column

PLAIN SECTIONS.

Who said they were not Money-Makers?

Read this Unsolicited Testimonial:

I have tried the fences the past season; and if any season would show up the poor side of an appliance for bees or bee-hives, the last one surely would. I watcht the outcome of using fences very carefully, and note the following: Two hives of bees, side by side, were given the second super each, one containing fences, the other old-style sections 4¼x4¼, no fences or separators, both having stored the first supers nearly full. The one containing fences stored nearly double the amount that the other did. Now, I found this to be the case all over the apiary; in fact, the bees seemed to give the preference to supers containing sections and fences, no matter whether they were next to the hive-body or two or three supers above. I won't say why this is so, but will leave that for you. As to the matter of cleaning fences, it is not a very great task, as only the uprights have to be cleaned; and the pleasure of having neat and even sections of honey compensates for whatever extra time is used. W. T. SHERMAN.
Millard, Wis., Feb. 13.

And now read this, from that careful and conservative bee-keeper,

J. E. Crane, of Middlebury, Vt.:

Will the evolution of the honey-box bring the plain section into general use? I believe it will. One dealer in Washington told me he would pay three cents per pound more for the 4x5 plain-section honey than for the old-style sections. Indeed, I was offered two cents per pound more, for 5,000 pounds of clover honey, to be delivered next fall, than I have been receiving of late for my best grade of honey, if put in plain 4x5 sections. In New York I inquired of Mr. Segelken for his plain section honey, that I might compare it with that in old-style sections. He said he had very little left in plain sections, as such lots were pickt up first by retail dealers, who preferred them to the old-style sections. I found the same true in Albany, N. Y., where I stopt to look over the honey. As these retail dealers are not in the supply business, I thought their opinions worth recording.

We now have about half a hundred more like them.

Keep Your Eye on this Column,

It may save you dollars.

The A. I. Root Company

MEDINA, OHIO.

GENERAL ITEMS

Bees in Good Condition.

Last year was almost a failure here. We got but 900 pounds of extracted honey and 200 pounds of comb honey. The season bids fair this year. Six hundred pounds of the extracted was dark honey-dew, and the comb honey also. But 300 pounds of extracted in the fall from asters, was very fair. As it is a pretty warm day, I shall make an examination of the bees.

J. WILEY MOUNTJOY.
Anderson Co., Ky., March 8.

Small Loss in Winter so Far.

I had 102 colonies of bees packt for winter, and I think they are wintering fairly well. I saw them Feb. 25, and I think there were but seven dead ones in the lot. I expected to lose very heavily, for the weather was cold and no bright, warm days so they could fly, until the middle of February; since that time they have had a very fair show.

I like the American Bee Journal very much indeed. I don't think anyone should try to keep bees without one or more good papers—the more the better.

JOS. S. SECCOMB.
Cayuga Co., N. Y., March 5.

Satisfied with the Business.

I have 200 colonies all in good shape. I have been feeding flour for three weeks, but my bees are getting natural pollen now from the pussy-willow. I produced 10,000 pounds of section honey last year. My honey is sold here and at Spokane; some of it went to the miners.

I have been in the bee-business for many years. I use the Langstroth-Simplicity 8-frame hive. I am satisfied with the business, and also truly satisfied with the American Bee Journal, to which I credit my success. May it lay on my table as long as I live and keep bees, is my prayer.

ISAAC HAYS.
Yakima Co., Wash., Feb. 27.

Not a Promising Outlook.

The outlook for honey this season is not very promising. Many of the fruit-trees, flowers, etc., were in bloom when the February freeze came, and all were killed. Just think of it, zero this far south! We have never had it so cold before. The bees were breeding up fast, but that stopt them for awhile, and weak colonies were lost. I have made a Manum swarm-catcher, Daisy foundation fastener, section-press, and an Alley queen-trap, besides hives, covers and bottom-boards. This is all done in my spare time at nights, etc. I have a small shop and a good variety of tools, and my brother has a saw-mill and planer, so I don't have much trouble about lumber. Success to the American Bee Journal. LEE ELDER.
Harrison Co., Miss., March 7.

An Anti-Robber Block.

I notice a great many questions in the Bee Journal about stopping robbing, and at the Colorado Bee-Keepers' Convention it was discust, and none of their theories were ever a success with me. I have a plan of my own that I have never given to the fraternity, and I have never failed to stop robbing. I have stopt them from robbing queenless colonies when they had half of the honey carried out, introduced a queen, and everything was all right.

I take a block of wood somewhat longer than the entrance, 1¼ inches square, and saw four or five notches in it large enough for a bee to go in and out. Place it in front over the entrance late in the evening

SECOND-HAND

Sixty-Pound Cans

For Sale Cheap.

Second-hand 60-pound Cans, two in a case, we offer, while they last, in lots of five or more cases (10 cans) at 40 cents a case, f.o.b. Chicago. They are in good condition. Better order at once if you want some of them. Address,

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PAGE

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Wire fences, as well as people, have felt the grip—of hard winter. Notice how they compare "after taking." No "tired feeling" about the Page.
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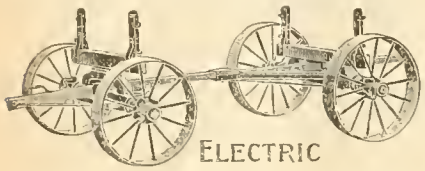

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which is neater, stronger, and in every way better than wood. Well painted in red and varnisht. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co. Box 16, Quincy, Illinois, for their new catalog, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

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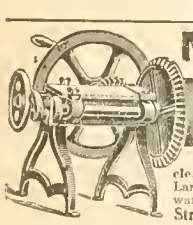

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double the eggs in the middle of the winter, when eggs are worth the most money. Hens do that when fed on **green cut bone.** It's best prepared by

DANDY GREEN BONE CUTTERS.

Made with or without gear. Cut **clean, fine and easy.** Can't be choked. Largest line made. Ask for what you want. Catalogue and prices free.

Stratton & Osborne, Box 21 Erie, Pa

Please mention Bee Journal when writing.

after the robbers quit work, or early in the morning before they come out, and they never offer to go in the small holes, while the bees of the hive will work in and out through the small holes without any difficulty. Almost all of the robbers will alight on top of the block, and if they can't get it away they will soon give up. Now I have never had a colony robbed since adopting this plan.

The above is a diagram of the block.

Clearfield Co., Pa. G. W. BELL.

Weather Hard on the Bees.

Yesterday morning it was 15 degrees and this morning 14 degrees below zero here. It is hard on the bees. They have had but one good flight since cold weather came to stay, and did not fly from all the hives then. E. D. HOWELL.

Orange Co., N. Y., Feb. 11.

Hard Winter on Bees.

This has been a very hard winter on bees. My neighbors tell me they have lost nearly all of their bees. Most of them are wintering on the summer stands. Mine are wintering nicely in the cellar. I have lost only one so far out of 41. C. L. BURLEY.

Calhoun Co., Iowa, March 11.

Bees Seem All Right.

Bees seem to be all right. They commenced carrying in pollen March 10. We have had the coldest February ever known in Kentucky. I thought the bees would all perish, but I believe they have come through in about as good shape as usual. Score another victory for the golden Italians; they winter as well as any bees. I have tried them all. W. S. FEEBACK.

Nicholas Co., Ky., March 14.

Wintering All Right.

I have 22 colonies of bees wintering all right so far in chaff hives. It was 30 degrees below zero here. I got about 900 well filled sections from the 22 colonies last year. I get the Bee Journal every Thursday. It is all right. Long may it live.

N. RASMUS.

Nemaha Co., Kan., March 14.

Half the Bees Starved.

One-half of the bees in this locality are starved to death. I saved 14 colonies so far. I think as long as we have "seed" we should "sow" and "try again."

JOSEPH UNTERBRINK.

Putnam Co., Ohio, March 12.

A Difference in the Honey.

I was a little puzzled in the work of my bees the past season. There were only two of the 10 of my colonies that I got any surplus honey from. They stood within a foot of each other. The honey from one was of a thin quality and of an inferior taste, so that none of my family except myself would eat it. The other was first quality and gathered, so far as I know, at the same time. There was the same difference between the sealed and the unsealed. I would like Dr. Miller to explain the cause of the difference. J. C. ARMSTRONG.

Marshall Co., Iowa, March 4.

Long, Hard Winter—Sweet Clover.

It has been a long, hard winter, and the bees don't seem to do much good any more here. Mine did not get more than what will keep them. I got only a very little honey from two or three colonies. I sowed

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BEST GOODS AT FAIR PRICES.

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GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

a little white clover and Alsike on a piece of ground last year. By the way, is white clover and sweet clover the same? When I bought the clover I askt if he had any white sweet clover, and he said it was all the same—that all the white was the same kind, there was no difference.

WM. Y. STACKHOUSE.

Chester Co., Pa., March 14.

[White or Dutch clover and sweet clover are not at all alike. The former grows only a few inches high, while the latter grows all the way from two or three feet to 10 feet in hight.—EDITOR.]

A Little Experience—Facing Hives.

I started the fall of 1894 with one colony. It wintered all right. In 1895 I increast the colony to two; in 1866 to nine; in 1897 to 18; and in 1898 to 25. The increase is rather slow, but sure, as the winter loss is small. I winter them on the summer stands, but have the hives well packt with chaff and sawdust on the outside, of course. I have five, six or seven hives in a group, so I can use 12 or 14 foot boards for packing-boxes. About ¾ of my hives face east and the rest west or southwest. The former had only one good flight from the middle of November to the middle of February—about three months' confinement; while the latter had three flights, and have had perhaps only half the loss in bees on the bottom-board. So that is a valuable object lesson as to which way to face hives during winter, and tallies with the advice of both Mr. Doolittle and Mr. Dadant.

JOS. M. REITZ.

Buffalo Co., Wis., March 11.

Colonies Strong and Lively.

I have 300 colonies in good condition at this date in winter-cases, two in a case. They are quite strong and lively on warm days.

I saw some time ago that foul brood was in Schenectady County, and likely to spread, but I hope it may be stayed.

E. H. STURTEVANT.

Washington Co., N. Y., March 14.

Report from Indian Territory.

My bees wintered well. I lost only three colonies out of 80. I wintered them on the summer stands, with super on, and packt with hay and leaves.

I increast from 34 colonies to 80 last season, and secured about 2,000 pounds of surplus, about one-half comb and balance extracted.

I sell my honey in the home market at 15 cents for comb and 10 cents for extracted.

I always speak a good word for the American Bee Journal. I prize it very highly, having taken it ever since I kept bees, and shall continue to do so. I hope this may be a good year for our business.

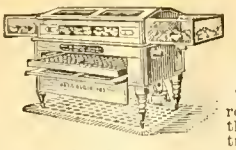
J. T. HAIRSTON.

Cherokee Nation, Ind. Ter., March 3.

Report of the Season of 1898.

Dec. 1, 1897, I put 204 colonies in the bee-house, and March 18, 1898, I took out 203, losing one by starvation. I offered them for sale for $2.00 a colony, but did not reduce them low enough so that I could handle them and do my farm work, so I doubled them down to 150 colonies; then I thought I would put sections on them and that would check them some from swarming.

We had an abundance of white clover bloom, but the bees gathered no honey from that source. Then basswood was the next to bloom and that lasted about four days so that the bees could work on it, on account of rain. Those that had the hive full of brood and honey stored one super each of 24 one-pound sections of basswood honey; and they were but a small share of the apiary. Then there was nothing more to store surplus honey from until buck-



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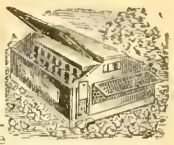

represent about equal value. This book contains everything that it is necessary to know to succeed in the poultry business. All about **Incubators and Brooders**, the best kind and the best way to handle them; thoroughbred poultry, with illustrations of each breed and a complete line of poultry supplies. We send it to all inquirers on receipt of 10 cents in stamps.

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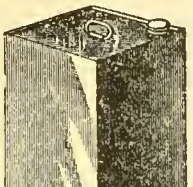

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wheat came into bloom, so I thought, as they swarmed, I would fill the balance of my hives for winter. By so doing I had 216 colonies to put into the bee-house, besides three that I disposed of in the fall, and they stored a little over 2,000 finisht sections of honey, besides several hundred partly-finisht ones. I fed some of the unfinisht ones to the bees, extracted some, and sold some in the home market.

Bees are doing well. On the 12th of this month I strolled down among them. The thermometer on the outside showed eight degrees below zero, and I took it in among the bees for 10 or 15 minutes, when it rose to 46 degrees above zero.

ANDREW M. THOMPSON.

Allegheny Co., N. Y., Feb. 13.

Poor Season Last Year.

The last season was a poor one in this section of South Carolina, tho I am hoping for a good seasen this year. The bees are now bringing in pollen. The weather is not favorable for them—it is a little too windy. I am working for comb honey. I did not get much honey of any kind last year, for the season was too poor. I am thinking that I will run for extracted honey when I get a few more bees. It will not pay me to buy more now. My bees are all hybrids. I want to Italianize them this year with the finest Italian queens. My stepmother has a few colonies of black bees that are regular, old-fashioned blacks—as black as coal tar.

The first bees I ever owned I found in a tree about four years ago. I have found some since, and bought some, so I now have a fair start in bees. I have learned a good deal about bees the last few years. I have taken the Bee Journal eight months, and I think that is worth twice the subscription charged for it.

I have tried sowing buckwheat here, and it does very well. I planted mine too late last season, and the frost killed it before the wheat had ripened. It helpt the bees a lot, for they would work on it when all other flowers had failed.

JULIAN HALLMAN.

Lexington Co., S. C., March 6.

Discouraging Prospect for Honey.

I notice in my last Bee Journal that some of the bee-keepers are telling of 25 and 30 degrees below zero. Here in Clayton Co., Iowa, the first of February we had 17 days in succession that the thermometer did not get above zero, and it was down to 38 degrees below some of the time; and this was without any snow on the ground. The ground is frozen six feet deep. If the bees and clover stand that I guess they will stand almost anything.

I started in the winter with 130 colonies, but have only 105 left now, with prospect of losing a good many more. The ones I lost had plenty of honey in the outside combs; as long as they had honey over the cluster they were all right. When that was gone it was so cold they could not move sidewise, so they starved right at the top of the hive.

When they talk about large hives I am with them, only I want my hive large up and down.

I have moved to town, leaving my bees on the farm four miles from here. I expect to drive back and forth, and take care of them this season, altho the prospect for a honey crop is very discouraging.

F. B. FARRINGTON.

Clayton Co., Iowa, March 12.

Cold Weather for Bees.

EDITOR YORK:—I send you one of our country papers so that you can see what kind of weather we have had the last two weeks; and Monday, Feb. 13, there was blinding snow flying, we could see no distance, and it was very cold. With it all I did not forget my bees, but after breakfast at 6 a.m., and my farm-stock was fed and cared for, my two boys and I went to work to get the bees in a good, dry cellar. We

THE GREAT "Grippe" Specific

OXYGEN TREATMENT.

The inhalation of this Oxygen Treatment is really wonderful, and is the nearest possible specific for the cure of **Consumption, Spitting of Blood, Asthma, Bronchitis, Hay Fever, Grippe** and all diseases of the **throat and lungs.** Don't give up hope before faithfully using this remarkable Oxygen treatment!

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Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

FOREWARNED IS FOREARMED

Do Not Wait until the last moment to order your Supplies. **You may be disappointed** by delay in shipment and lose a portion of the honey harvest. **Save money and gain honey** by sending us your estimate NOW. We are offering **Special Inducements for Early Orders.** Our 1899 Catalog free.

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Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

made a fire in it and got the thermometer to register 46 degrees, and they seemed as happy as fighting chickens; and, by the way, I felt good, too, in knowing that they were all alive. Fifty-two colonies, all with plenty of honey except one which I soon fixt; almost all of them got up to the top of the combs with plenty of honey on each side of them. I lookt in some of the hives a few days later when they were in the cellar, and found the bees on each side of the hives on the honey enjoying themselves.

Last Monday killed a great many bees. My brother, S. J. Hammond, lost 10 out of 100 colonies, and another neighbor lost two out of eight.

The last few days have been warmer and the snow is melting slowly. Yesterday the thermometer was 48 degrees in the shade.

We have had snowdrifts 10 feet deep. I helpt two days last week to shovel roads open to get out. With all the snow and no regular mail the good old Bee Journal got here at the regular time.

L. A. Hammond.

Washington Co., Ind., Feb. 20.

Bees in Good Condition.

I have eight colonies of bees in good condition, considering the cold weather they have gone thru, as they have been on the summer stands all winter and the thermometer registered 16 degrees below zero.

I am using the 12-frame Langstroth hive. I like it very well. I am delighted with the reports from other bee-keepers in the Bee Journal, and am well pleased with the paper itself. Wm. Hitchcock.

Lonoke Co., Ark., March 3.

Bees All Right so Far.

My bees are all right so far. I examined some in February after the cold spell, and found some brood and also some hatching drones. Those few I had in the cellar I put them out-doors, as it was too damp for them inside, and they are doing all right.

Lucas Co., Ohio, March 3. M. Best.

A Believer in Big Hives.

In 1868 I commenced working with bees and tried to commence right. I read Gleanings awhile, and then took the American Bee Journal, which I read yet. And now what *I don't know* about bees *of course* is not worth knowing!

The colony I had on the scales all last summer made a gain of 54 pounds in eight days while basswood was in bloom; that was the only gain for the season here. Many colonies starved before winter, and many others are dying now. I have lost 6 colonies, and have 104 with plenty of stores in the middle stories on the summer stands.

Let Mr. Doolittle have small hives and Mr. Dadant large hives, if they are suited with them; but Gallup and I want big hives. For the last 10 years I have used the 3-story 15-frame Langstroth hive, which makes a big hive. Now when there comes nectar, so the bees can gather from 10 to 20 pounds a day for two or three weeks, those hives will hold it, and the bees don't have to look around for more room or a new home. They won't swap such a hive full of honey for *nothing*. And the honey can remain until thoroly ripe, without being in the way of the bees, and always makes the best honey when extracted. My bees never swarm from these hives. I hope others will try the big hive and report, from different localities. I feel that Dr. Gallup and I are on the right track for the most honey and best queens. (Say, Doctor, let's stay with it and convert the world to big hives and good queens.) Geo. W. Riker.

Lucas Co., Iowa, Feb. 25.

Please mention Bee Journal when writing Advertisers.

Convention Notices.

Texas.—The Texas State Bee-Keepers' Association will hold their 21st annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1899. All interested are invited. No hotel bills to pay.

W. H. White, Sec.

Utah.—The Utah Bee-Keepers' Association will hold their regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.

Mill Creek, Utah. J. B. Fagg, Sec.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

Bees Wanted

Quote price and give particulars. Address,

Theodore Bender, Canton, Ohio.

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BEE-KEEPERS! Let me send you my 64-page Catalog for 1899.

J. M. Jenkins, Wetumpka, Ala.

We don't keep Supplies

WE SELL THEM

In order to do this we have to have GILT-EDGE STOCK, and make prices right.

Send us a list of what you want for the coming season, and let us make you SPECIAL PRICE.

Standard Lumber Co.

10Atf MANKATO, MINN.

CYPRESS BEE-HIVES

BEST IN THE WORLD

Complete line of Bee-Keepers' Supplies—Right prices—Send for catalog.

Crossman Manufacturing Co.,

109 Commerce St., DALLAS, TEX.

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FREIGHT PAID to any address. That's the way we send out our

CYPHERS INCUBATOR.

It combines the good qualities of all machines and has the faults of none. Our Catalogue and Guide to Poultry Culture tells all about the laws of incubation, and how to raise, feed and market poultry—all about the money end of the business. Contains plans for construction and cost of modern poultry houses and many other things worth knowing. **Sent for 10 cts.**

THE CYPHERS INCUBATOR CO. Box 50, Wayland, N. Y.

HONEY AND BEESWAX

MARKET QUOTATIONS.

Chicago, March 7.—Fancy white comb brings 13c., and there is a good demand for it. No. 1 white is also wanted at 11@12c., depending upon quality. Lower grades of white, amber and mixt colors range from 8@10c., with dark and buckwheat 7@8c. Extracted white clover and sage, 5c; basswood and alfalfa, 7c; amber grades, 6c; buckwheat, 5½@6c. Beeswax, 27@28.

Market generally healthy in tone with best grades of honey scarce. R. A. Burnett & Co.

Detroit, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c.

M. H. Hunt.

Kansas City, March 10.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. Clemons & Co.

New York, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

Hildreth Bros. & Segelken.

San Francisco, March 9.—White comb, 9½@10½c; amber, 7½@9c. Extracted, white, 7@7¼c; light amber, 6¼@6½c. Beeswax, 24@27c.

Market is not favorable to buyers, more especially for desirable extracted, stocks of which are decidedly light. Comb is in moderate supply, and has to depend almost wholly on local custom for an outlet. Quotable rates remain as previously given.

Boston, March 10.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No. 1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

Blake, Scott & Lee.

Omaha, March 13.—The stock of comb honey in this market is very light. There are not over 300 cases of all grades in first hands. Demand continues fairly active. Fancy white quotable at 13c; choice, 12c; No. 1 amber, 11c. Extracted well cleaned up. Peycke Bros.

Buffalo, March 10.—There is only very little dark poor honey in our market, which is selling at mostly 8 cents. Some strictly fancy white comb honey would bring about 12 cents. Little, if any, here. No extracted to mention. Fancy pure beeswax, 30c Batterson & Co.

Cleveland, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. Williams & Co.

Milwaukee, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

A. V. Bishop & Co.

Bee-Supplies.

Root's Goods at Root's Prices.

Pouder's Honey-Jars and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

WALTER S. POUDER,

512 Mass. Ave.,

Indianapolis, Indiana.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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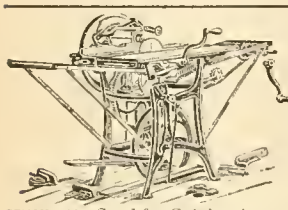

UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, graining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.
Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

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It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,
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☞ IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
2 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.

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22nd Year **Dadant's Foundation.** 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co.	Watertown, Wis.
E. Kretchmer	Red Oak, Iowa.
J. M. Jenkins	Wetumpka, Ala.
Portland Seed Co.	Portland, Oregon.
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L. C. Woodman	Grand Rapids, Mich.
J. Nysewander	Des Moines Iowa
Inter-State Mfg. Co.	Hudson, Wis.
J. Nebel & Son	High Hill, Mo.
G. W. Fassett	Middlebury, Vt.
J. W. Bittenbender	Knoxville, Iowa.
J. L. Gray	St. Cloud, Minn.
Pierce Seed and Produce Co.	Pueblo, Colo.
F. Foulger & Sons	Ogden, Utah.
R. H. Schmidt & Co.	Sheboygan, Wis.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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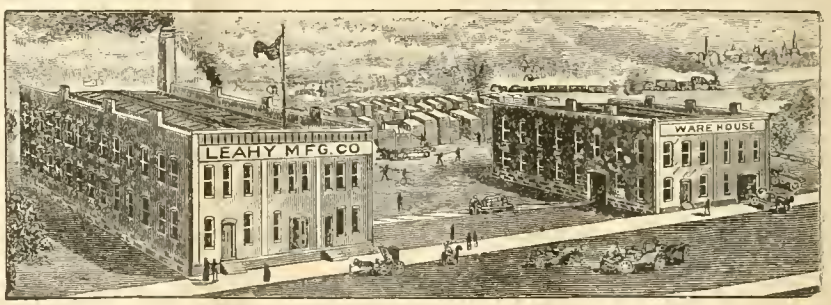

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LEAHY MFG. CO., Higginsville, Mo.
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404 Broadway, E. St. Louis, Ill.

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Eastern Bee-Keepers!

Why send West for your SUPPLIES, when you can get them near home, in less time, with less freight to pay, and at as low prices, quality considered. We keep in stock several carloads of

HIVES, SECTIONS, COMB-FOUNDATION, SMOKERS,

in fact, nearly everything a bee-keeper needs. We also have at Glen Cove, L.I., two apiaries, and sell from them

ITALIAN BEES AND QUEENS.

Untested Queens, after April 10, 70 cts.; 3 for $1.80; Tested Queens, $1.25 each. Colony of Italian Bees with a Tested Queen in a complete Hive, $7.50. Catalog free. **Fertile Eggs** from heavy-laying White Wyandots, $1.00 per 13; $1.50 per 26.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. *Illustrated Catalog, 72 pages, Free.*

We also manufacture **Tanks** of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MARCH 30, 1899. No. 13.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

WHAT ABOUT THE "GOLDEN" METHOD.

Now that the Golden method has been fully set forth, what shall we say about it? Rather a matter for trial than a matter of criticism. It is a superior auger *if it bores better than other augers*, otherwise not. Plausible enough to demand a show, and in points "onplausible" enough to demand watching. Watch a little out as to what the bees do with their pollen those first five days. Mr. G. well says that the method saves an immense number of new hives and fixings, which of course need to be figured in as reasons in favor.

Cogitator once ran a number of hives several years in which bee-space chambers (full of bees usually) surrounded the sections entirely top and sides. They were not so they could be used as climbways at all. The inventor was only seeking to give *confidence* to the little misers, and secure evenness of temperature. I don't *know* that this plan secured the storing of more surplus than otherwise would have been stored, but it seemed as if it did. So I cogitate that Golden's spaces help on somewhat, in the same way as those of mine, but not for the reason which he assigns.

"KNOCK-DOWN" EVIDENCE ON HONEY-DEW.

That knock-down evidence that leaves secrete honey-dew without any insects at all (page 98) has been given before. But 'Tater is just scabby and dirty enough not to believe it, either for 'tother chap, or for this chap. Of course, Mr. Nash is sincere and all right—but then. There are experimenters, *and experimenters*. The commonest kind are capable of proving things that aren't so, in the most lovely fashion. He wiped off the surface sweat, but not that which had penetrated the pores of the leaves. This last modicum of it workt out in time. What we are askt to believe is too much like believing that an amputated arm would spurt out blood 24 hours afterward. Still, 'Tater may some day have to hunt his hill, and admit that there sometimes are circumstances under which leaves pour out sweet of themselves. Freshly-cut stubble certainly does sometimes—in immense quantities—but that is more like having the *stump* of the arm bleed after an amputation.

A LITTLE OLD-FASHIONED FAITH NEEDED.

"On hand with money and influence to defeat." Yes, sir; that's the kind of an age we are living in. No law to make a man sell his products for just what they are is going to get thru without an awful fight—and another one to enforce it. See Mr. Abbott's article, page 99. But did you ever think how much a little genuine, old-fashioned faith—faith in the ultimate triumph of the Kingdom of God—helps people in such a contest as that? Sometime, not far off, in the sweet by-and-by, things will not be sold under false names.

PRICE OF SUCCESS—A HARD PROBLEM.

"From daylight to dark, year in and year out—the price of success in almost any calling." (Page 102.) That's another thing the sweet by-and-by will abolish. At present we are tied up in this contradictory fix. First, excess of labor offering, so that some must go idle. Second, long hours for all that do work and dreadfully long hours for most who get independent jobs. I don't know how to solve this problem of too much and not enough. If I did (and told) that would be politics, and I should have to stop.

UNQUEENING TOO MUCHEE FUSSEE.

Interesting to see that so strong a hand as F. L. Thompson is not satisfied with the unqueening-in-harvest methods. (Page 103). Too much allee time fuss, fuss, fuss, when a body hasn't time to fuss. And at best it depopulates the colony undesirably.

SWARMING WITHOUT INCREASING.

While successful non-swarming seems to be no nearer than the millennium, swarming without increasing does seem to be getting down to a cheerfully accurate science. Mr. Thompson's last contribution to it seems excellent. Put the hive that has swarmed a-top the new one, pretty closely shut up, yet with a perforated-zinc passage leading below, for young workers, and an escape at the door, available for drones and young queens. Soon all the population have left; and administration is in order on an empty hive—and a swarm from the full one, perchance.

WHEN TRAVEL-STAINS ARE NOT TRAVEL-STAINS.

Quite important is that boiling from J. E. Crane, on page 106. Certainly travel-stains can't be travel-stains literally if they go clear through. Undoubtedly they sometimes do and sometimes do not. Whether real travel-stain is rare or not is the question—let's find out. Current opinion has been that travel-stain is a very common thing.

STINGLESS BEES OUGHT TO BE MORE CLEVER.

The information about the stingless bees of Old Mexico, on pages 109 and 110, deserves a more prominent place than it got. Three or four pails of honey sometimes from a colony of the little trigonas, which are individually only 3/16 of an inch long. If we were going to keep them for honey we should object to their style of storing honey in hollow bullets. Why can't they be clever, and put their honey, as well as their brood, in civilized comb?

TWO DIFFERENT RANKS OF BEES.

Bees (as to their storing) are divided broadly into two different ranks. The one prepares its honey by manipulation, and processes in which comparatively little is added to it; the other trusts mainly to secretions which they add to it, usually some acid. All the bees we are familiar with here belong to the first rank, but elsewhere there are a multitude of species of the second rank. And, if I am right, no two are exactly alike as to the character and palatableness

of the chemicals they pour in—some nice acid honey, and some abominable acid honey. Mr. Andrews (page 110) has struck a good kind. Possibly the decided novelty of its tamarind-like deliciousness may stir up a market for it sometime. And you see he has a paper-making bee that stores honey—and also belongs, like our bees, to the non-chemical rank.

NO HUMAN HOGGERY WANTED.

If six respectable business men should consent to act as winesses in such a disgusting show of human hoggery as that proposed on page 124, I should be surprised. Let's be decent—and gobbling down (of any kind of food) a pound and a half in a minute and a half is not decency.

APIS DORSATA—GOOD EXAMPLE TO FOLLOW.

You hit 'em well, Mr. York, on page 120, about those howls against Apis dorsata. Let the big bee have judgment on the merits (or demerits) of its own case. What's the use of forever looking at it thru the specter of Frank Benton—and then going into a spasm? F. B. is certainly not a pet at the American Bee Journal office, yet our Editor's position is as you see. Right good example to follow.

"YEARS HAVE COME, AND PAST AWAY."

We're growing old, we're growing old. For 15 consecutive years Thomas G. Newman has held the helm of the National Bee-Keepers' Union—with signal ability and success. Of them that were given him to defend he lost none. Especially we should remember that his victories have redounded to the protection of all the rest of us, outside the Union. And now he says this must be the last time. Thus to us all, sooner or later, there comes the time for us to sing—

"I do not pass this way again."

GRADES OF HONEY TO HAVE THEIR "PICTER TOOK."

And so that breezy and irrepressible Colorado convention is going to have photographs prepared illustrating its grades of honey. Tiptop idea. Language can be twisted with dreadful ease; but "photos," while not always competent to straighten out folks who have a twist in their moral natures, are not easy to pervert. And how pleasantly photographing would relieve us of *impossible* grades of honey!

COLONIES RUN FOR COMB VS. EXTRACTED.

Two similar colonies, one run for section honey and one for extracted, and the former will close the season with plenty of honey below, while the chances are that the brood-frames of the latter will be very light. Comrade Aikin makes a good point when he shows this up, on page 115.

CUBA'S "SKEETERS" AND SNAKELESS PORTO RICO.

Queer about those mosquitoes in Cuba that Mr. Poppleton tells of, on page 114. Does cowardice affect all animate creation on that flowery and languid isle? That both Spaniards and Cubans fought by shooting off their guns and falling back, we've heard before; but "'skeeters" that shoot off their music at a distance, and then flee to cover, are a novelty.

Porto Rico's exemption from snakes may be from having (some time in the remote past) a very dense population of snake-eating people, often hungry to bed; but that Cuba, with its immense swamps, should have no venomous snakes, and few of any kind, is curious indeed.

BEWARE OF BEES THAT BUILD TOO MANY QUEEN-CELLS.

If we obey Mr. Doolittle and all learn to be queen-breeders, perhaps Dr. Gallup's method, page 114, will serve as a good way to begin—strong unqueened colony made still stronger by shaking in hosts of bees—not a too-old larva left in the hive anywhere—plenty of eggs, both foreign and domestic, in center, and also on each side. Not surprising that he got 36 at a lick under such conditions, even from a first-rate colony. Beware of the strain of bees that builds two or three dozen cells under circumstances where ordinary bees would build only half a dozen—degenerates, Cogitator thinks, backsliding into bumble-beeism.

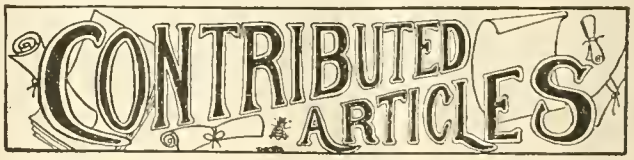
GOT HIM AT LAST!—SWEET CLOVER TRICKS.

Glad we've got him. I'm as happy as the aged husband was when his wife (after 40 years of nightly search) found a sneak-thief under the bed. After many years of multitudinous denials from the chaps who didn't sow sweet clover by the roadside, behold the man! It was honest-looking Mr. Stolley, page 113. But I hope community will decide that the fellows who didn't confess need "massacreeing" more.

It is a mitigating circumstance that he "squeals" on his favorite plant, and tells us a bad trick of it that we had not heard before—sprinkles itself all over the natural prairie-mowing grounds, and gets dead and dry like hazel-brush just as the late prairie-grass is ready to cut.

Indian ponies had to be taught before they would eat corn—white man's ponies have to be taught before they comprehend sweet clover. Very pretty aphorism.

COGITATOR.



A Crisis in California Apiculture.

BY PROF. A. J. COOK.

WE have all read of the person who "when she was good she was very good, and when she was bad she was terrible." At present that seems not an inapt characterization of Southern California. In good seasons like that of 1897, from 100 to 500 pounds of honey are often secured from each colony, and that even with three or four hundred colonies in the apiary. No one will say that that is not "very good." Yet close upon this excess of sweetness comes 1898, with a severe drouth, and no nectar-secretion by the flowers, and no honey product from the bees. The provident bee-keeper did not take too severely from the bees the previous season of abundance, and so his colonies were well supplied, and past the season with no loss. Less careful bee-keepers removed so much of the honey that no margin was left to bridge over a year of honey-dearth, and so, long before 1898 had past, the bees were victims to greed on the part of the owner thru starvation.

But now comes 1899, and all prospects point to a greater drouth than that which confronted us a year ago. As yet we have only four inches of rain, whereas we need many times that amount. Even the bees of our most expert and careful bee-keepers are short of stores, and unless rain comes soon, or liberal feeding is practiced, there will be few bees in Southern California to greet the incoming century as 1900 dawns upon us. Very likely floods of water and floods of honey will come with the new century, if the bee-keepers are ready to avail themselves of the restored conditions of prosperity.

It is, then, a question of great practical import to the bee-keeper, how he may best and most cheaply hold on to his bees, and maintain them in health during the protracted famine. To keep full colonies breeding, and feed enough to sustain all, is too costly, and not wise at all. Simply working to keep queens, and just sufficient brood-rearing and bees to keep her in good thrift and vigor would seem the wisest plan. Could not this end be met, and at the same time economy be served, by securing at the same time young, vigorous queens in all cases where such were not already in the hives? Nearly all of us have at times taken a queen with a pound or less of bees, and in a few weeks have had a good colony. Is this not a good year to make nuclei a main or entire feature of the apiary? Why not rear queens in small nuclei until we are sure we have only young queens, and all from our best stock?

Then, why not keep our bees reduced so as to save the energy of the queen, and at the same time save to the utmost in the expense of feeding? Scant stores usually lessens the working energy of queen and workers alike, and so a minimum of food, consistent with the well-being of the bees, will save alike in the expense and in the wear and tear of both queen and bees. I believe a little labor in reducing the bees to nuclei and in requeening where such a course is desirable, may save much, and pay good profits in the time spent.

It is very probable that 1900 will be a season of rains and honey, and fortunate indeed will he be who is ready to avail himself of the riches that come so generously at such seasons.

PRESERVING THE EMPTY COMBS.

There is one more thing that should be kept in mind. Good combs are very valuable, and, with an abundance on hand, colonies can be built up with great rapidity when the time comes to prepare for the harvest. It is very wise, then, to look to it that the moths do not ruin the combs set

free by the formation of nuclei, as suggested above. These should be kept in very close boxes, where it is cool, so that they will not melt down, or else hung in cool, lighted rooms so as not to touch each other.

I have kept combs over, year after year, in both these ways. In practicing the first method we must be sure that no moth-eggs are on the combs, or, if we are uncertain, we must examine, and if necessary must use sulphur fumes to destroy these comb destroyers.

In one respect California is very fortunate in her misfortune; when these seasons of disaster come to us, we know for weeks long before the season opens, that no harvest will come, and so we can plan to make the best of our ill-fortune, and can set about some other work to busy our hands and fill the larder.

THE FROST—ANOTHER CALAMITY.

They say calamities never come singly, and Southern California seems to illustrate the truth of the saying the present season. Two weeks ago we had a bad freeze-up. The thermometer reacht successively, for four nights, 27 degrees, Fahr., 25 degrees, Fahr., 20 degrees, Fahr., and 26 degrees, Fahr. In the East that would be thought mild, but here in our citrus groves it borders on the disastrous. The oranges and orange-trees seem not much injured, but the lemons, and the lemon-trees, are very greatly damaged. The trees look as if the blight or a fire had been among them. It is also reported that bees suffered, but as they could fly days during the time, I think it was more probably depleted larders that victimized the bees.

Los Angeles Co., Calif., Feb. 24.

Cold Winter for Bees—Other Matters.

BY MRS. L. C AXTELL.

I FEAR it has been too cold for bees in this region, as they were not strong in numbers, each colony being rather small. If the winter had not been colder than the past few winters, I think they would have wintered all right, and possibly they may yet where they were packt with chaff. Ours had filled their brood-nests very full of honey, and the bees lookt and acted healthy, so we concluded to let them go without uniting them, as uniting is

Mrs. L. C. Axtell.

not a very satisfactory piece of business, and certainly not very desirable work.

The bees that are in the cellar I think will be all right, even if the colonies were small. There seemed to be in our whole 155 colonies scarcely any that we could call strong; yet, as I said before, they lookt and acted healthy late in the season, but just about the time they began to gather fall honey they had dwindled down weak. The cause, I think, was from getting so much peach-juice. The last of July and first of August our peach-orchard was alive with bees on the early peaches; they would not only suck the juice out of the ripe ones, but from those that were rotting. Often we would see a peach almost covered with bees, and they seemed stupid sometimes, not sick, but loth to leave the peach, and often would stay all night on the peaches. But on looking into the hives and in front of them, there were no dead bees, and as they were almost out of honey we thought it best to let them alone. I now think it would have been a good plan to have fed them some white sugar each day, to mix in with their peach-juice. The honey in the hives had a decided peach flavor, and was rather dark.

When the fall flowers blossomed they almost let the peaches alone, so by the time the neighbors' seedling peaches ripened they did not bother them much. It was the early budded kinds they bothered the most. One kind, especially after several days of rain and damp weather, rotted badly, the bees working on them to their harm.

I am glad that we took great pains to pack those out-of-doors with chaff, the very best we knew how, and set them up from the bottom-board about an inch, as we always do.

This has been the coldest winter here since 1885, when the mercury went down to 28 degrees below zero. Last week Thursday it reacht 30 degrees below, and every night since has been from 15 to 25 degrees below, so we will probably have no peaches another season. I hope the peach-juice will make no difference with the wintering of the bees; I think they did not store enough to affect their winter honey, but I think it caused them to dwindle some, but not so much as they would have dwindled if they had not gotten the juice, as they had failed to fill the hives in the spring full enough to carry them thru and cause the queen to keep her hive full of bees. The peach-juice caused the queen to go to laying eggs in the fall two or three weeks sooner than she otherwise would have done. But the juice seemed to sicken or cause the old bees to become less in numbers, altho I could see no dead bees anywhere.

Last spring opened up promisingly, and we got everything in readiness for a crop of honey, but the weather was so cool, wet and cloudy that flowers, especially white clover, failed to secrete nectar. We had but two swarms, and they were more supersedures than natural swarms; but half a dozen colonies or so went to work in the sections, so we secured only about 30 or 40 pounds of honey from the whole apiary of 155 colonies. I think we would not have had that if it had not been for the honey in some of the supers we put back on the hives in the spring. I think we got the least surplus honey the past year we ever did, tho we had to feed the bees scarcely any—a few dollars' worth only—before white clover bloomed.

Warren Co., Ill., Feb. 15.

Prices of Honey Not Made by Law(?).

BY G. M. DOOLITTLE.

DO not conclude that it is because something is out of joint politically that you get such a low price for your honey, or have such a hard time in the world.—Rev. E. T. Abbott, in American Bee Journal.

It is impossible at this time to form any idea of the probable effect of Cuban honey on the American markets. If the present duty should be removed, it is easy to see that it might be a serious competitor .....if it were sold for less money, as it could be with the duty removed .....So far Uncle Sam has made no move to annex Cuba; and unless he does there is no reason why the duty should not remain on Cuban honey; and even if annexation should take place, it does not necessarily follow that Cuban honey will come here free.—E. R. Root, in Gleanings.

Now it seems to the writer that law has nothing to do with increasing the price of the produce of any individual or class of individuals..... While the law has nothing to do with high or low prices, it does have something to do with preventing fraud and deception.—Rev. E. T. Abbott, in American Bee Journal.

While the price of almost every agricultural commodity has declined greatly during the past 30 years, official salaries and taxes have increast. This applies to local, State and national affairs, and no political party pledges itself to reduce the big salaries nor abate the bigh taxes.—J. C. Stephenson, in Free Press.

Will the reader carefully go over the above quotations from three noted men, until they are perfectly familiar with what is said, and what would be the logical result of each when carried to its legitimate end? Having done this, let us look at the matter a little to see if it is a *fact* which Mr. Abbott is stating when he tells us what he does about the price of produce (honey) not being made by law.

God made the world and placed in it, and on it, all that was necessary for *all* men, and this part is included by the one word "*land*." In the true economic sense, the fish of the sea, the fowls of the air, and the bees in their wild state in a cave in the rocks or hollow tree are included in the term land, as well as the forests, mines and earth. But man could not use or appropriate any of these things without an

effort of muscle or brain whereby any of the natural gifts of the Creator were changed from the natural form to something desired by man, or some portion of the human family. And this effort of the hand or brain is called "*labor*." And the production of labor on land is called "*wealth*," because it is something desired by some portion of the human family. And thus it comes about that *labor alone*, aided by the forces of nature, produces *all* wealth.

W. Z. Hutchinson finds a wild swarm of bees in its native home in the forest, and by labor of muscle and brain plans and makes a modern hive with supers, into which he places said wild swarm, and in due time thru his labor he has several cases of nice comb honey (wealth—something desired by man) stored away in his shop. He next sends it to a distant city to be sold on commission, and the carrier, the commission man, the retailer, the book-keeper, etc., are all laboring on land, from an economic standpoint, just as much as Mr. H. was, in producing the honey. Thus, to understand a thing fully, we must look at it in all of its bearings, if we would come to a right conclusion in any matter, and not make statements which "will not hold water."

We have seen that *labor* alone produces all wealth, but mere *effort* of head or brain does not constitute *labor*, but *effort which is productive* of anything desired by the human race or any portion thereof. If, when Mr. Hutchinson has that honey all nicely crated, I go and work all night digging a hole thru the well under his shop, and just before morning carry off part of the crates of honey stored there, tho I may put forth much *effort* in so doing, yet, as by that effort nothing has been produced which is desired by any member of the human family, such effort is *not labor*.

And if "some Napoleon of finance" sits down in his office, and by the most arduous effort thinks out a plan and gets laws past whereby he is able to steal a railroad, form a trust, or accomplish a corner in the money market, by which he is enabled to *reduce the price of honey* at the expense of bee-keepers, or cause them to pay *a higher freight-rate* on their honey, so that he can live by "his wits," as is often exprest, that effort, no matter how arduous it may be, is *not* labor in the economic sense. And, notwithstanding what Mr. Abbott would have us think about nothing being out of "joint politically," history proves that nearly *all* of our *laws* are made *politically*, and nearly *all of our political laws* are made for these "*Napoleons of finance*," to the robbery of bee-keepers and others, thru prices made by law. And to the man who "sees clearly," these politically-made laws are so much more oppressive to bee-keepers than any adulteration of the past or present, that the adulteration matter, which has been in every bee-keeper's mouth during the past decade to account for his "misery," is but a "drop in the bucket" compared with the robbery coming to bee-keepers thru our *unjust system* which prevails, by laws *bought thru* by our Napoleons of finance, and sanctioned by such bee-keepers as Rev. E. T. Abbott, and 99 out of every 100 of the rest of us who call ourselves apiculturists.

Let us look a moment: According to statistics of a few years ago, there were living in the city of Pittsburg, Pa., 65 men whose aggregate wealth was $700,000,000. This wealth had practically been accumulated within 20 years. Now, if I read Mr. Abbott aright, he would claim that, because these 65 men had "climbed up the mountain side" faster than either he or I had done, or rather, nearly reacht the top without climbing at all, they had not hindered us any, for "law has nothing to do with increasing the price of the produce of any individual." Have they hindered us any? We shall see.

It is but reasonable to suppose that it would take a higher order of ability in each of the above 65 men to manage their business than is required in us bee-keepers who labor hard for a whole year with an income of $1,000 or less annually to show for it. But would it require an ability greater than is required in the Secretary of the Treasury of the United States? Yet that officer receives only $8,000 a year. But suppose we allow them the salary enjoyed by the President of the United States—$50,000 a year—and that they are each worth that much to the country; and supposing that they had saved all their earnings for the 20 years, the accumulation of the 65 men for that time would have been $65,000,000. As their accumulations were $700,000,000, it is evident that they have received from the bee-keepers and laborers of the country during the 20 years $635,000,000 in addition to what they would have earned with a salary equal to the President. How did they get it? We have seen they could not have earned it, for the most of them did no kind of labor except of the kind I did in securing Mr. Hutchinson's honey; certainly not more than to earn the $50,000 salary we have allowed them.

As we have already seen that *no wealth* can come into the world except by *labor on land*, it *must* have been taken from others who *had* earned it, thru our unjust laws. And yet Mr. Abbott tells us "law has nothing to do in increasing the price of the produce of any individual!" And these 65 men are only samples of thousands of others who are daily gathering from the bee-keepers of our land, and from other laborers, thru their *law-made* prices, till at the lowest estimate $1,000,000,000 are being taken from the rank and file of our people who produce *all* wealth, and given to the few each year, until 25,000 men own one-half of the wealth produced by 70,000,000 people. This wealth is taken without giving any return in labor of either hand or brain. It is being gathered from bee-keepers, farmers and professional men, from the laboring men, from the women in cities toiling at starvation wages, and from helpless children; gathered from all of these and poured into the lap of the *law*-protected favorites, whose wealth no man can comprehend. And yet Mr. Abbott evidently would claim that this is no hindrance to those from whom it is taken!

Think of a scheme brought forth by "wise heads" of our Government which gathers from its starving paupers and hard-workt bee-keepers, gifts to pour into the laps of the millionaires! How do the people furnish this money? By the extra price paid on all the *law*-protected goods they buy. E. R. Root gives a little hint regarding how the law works, and J. C. Stephenson tells how the "produce" of salaried officials and taxes are *law*-increast.

In the Bee-Keepers' Review (page 17), R. L. Taylor would have us think that Gen. Alger got his millions by "saving $3.00 stage-coach fares in walking 40 miles and back again;" but informed bee-keepers know that *law-protected lumber* made every bee-keeper using hives tributary to his riches, by paying a higher price for the lumber they had to use. Had Mr. Alger commenced to walk with Christ on the plains of Bethlehem, and been enabled to walk 40 miles each working day ever since, at the same rate Mr. Taylor tells us of, he would still have 227 years to walk before he would have gotten *even one* of his millions he now possesses.

It seems strange to me that bee-keepers can see *so much* in adulteration, and spend time and money in fighting it, without a word about the *unjust system* in our country which is "slaying its thousands to where adulteration slays its tens." Adulteration is bad enough, God knows, but would it not be well to get this "big beam" (our unjust system) out of our eyes, so that we can "see clearly" to pick out "the mote" (adulteration) from our national affairs?

Onondaga Co., N. Y.

Value of Queens in the Spring.

BY C. P. DADANT.

THE publication of several articles from me about large hives, in Gleanings and the American Bee Journal, has brought forth a number of remarks from different writers, and I have noticed that great stress was laid upon my statement, that in the spring the queen is the most valuable part of the colony. I had resolved to say nothing more, being rather tired of a discussion in which I take no interest, as I know it is out of the question to change our critics. But the remarks on page 170, quoting Mr. Taylor, have brought the matter afresh to my mind.

There seems to be a denial of my assertion that the queen, in the spring, is the most valuable as well as the most expensive part of the colony. Mr. Taylor says, "Air is of most especial value, yet is it not the least expensive?" What I wish to say is only a repetition of what we all know. In the spring a bee-keeper may have empty hives, empty combs, queenless colonies, but he never has queens without bees, colonies without hives, unless he has bought them at great expense and great risk from a warmer latitude. It is therefore a fact, and a fact which does not bear discussion, that the queen is the *most valuable* as well as the *most expensive*, since it is the *most scarce*, requisite of a good colony, and the *sine qua non* of a living colony of bees for the opening season.

Air is inexpensive, but if Mr. Taylor were deprived of air, he would be ready to pay a big price for it within a few minutes.

Hancock Co., Ill.

The Premiums offered on page 206 is well worth working for. Look at it.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 182.]

Next was read a paper written by Mr. C. P. Dadant, of Hancock Co., Ill., on

Producing Extracted Honey on the Mississippi River.

It is with the greatest pleasure that I open a subject which is probably more familiar to me than any other question pertaining to bee-culture, as we have made the production of extracted honey on the Mississippi River a constant practice for a quarter of a century or more. It is only necessary to state our experience and our reasons for finding it more profitable than the production of comb honey in the same circumstances.

It was only after some 10 or 12 years of experience with both comb and extracted honey, begun immediately after the invention of the honey-extractor, that we finally concluded to devote our apiaries almost exclusively to the latter.

Every apiarist who has read up on the subject is aware of the great cost of comb to the bees. It is by digesting honey that the bee produces wax, which is produced much in the same way as fat on farm animals, and costs the bees about the same proportion of honey as fat costs of grain—an amount variously estimated at from 7 to 15, and even 20 pounds, according to the more or less favorable circumstances in which the insect or the quadruped finds itself. The production of extracted honey does away in part with this expenditure, or, in other words, with the enforced production of comb during the harvest.

When the colony is populous and the crop begins, as it very often does in a sudden way, the bees often find themselves short of room to deposit their honey, even before they have become prepared to produce any comb; for it takes some 24 hours before the transformation is made, and until wax is produced and comb is built, a part of the bees at least, have to remain idle and lose the opportunity of going to the field. And if comb has to be built right along to lodge the crop, it is a very important item of expense to them, both in time and honey. It is therefore not astonishing that bee-keepers should have found in practice that more than twice as much honey could be produced, if the combs could be furnisht ready to be filled by the bees instead of having to be built by them.

Some comb honey producers who think that this question has been overestimated, say that the bees naturally produce beeswax anyhow, and that this beeswax must be used by them or wasted; but they do not stop to think that a certain amount is needed at all times, even when full combs are given to the bees, to repair such places as may have been damaged by the handling, or to lengthen the cells that have been cut down in extracting, and also to seal the cells when they consider the honey sufficiently ripe to be sealed.

I do not know whether the bees are really compelled by Nature to transform some honey into wax if they will or not during a heavy honey-flow, but I can hardly believe the quantity thus produced can be very great in ordinary circumstances; for I have never seen any beeswax wasted except in accidents to the bee-hive, such as the breaking down of some of the combs by heat and weight, when the bees are all compelled to fill themselves to the utmost with the wasting honey. In such instances I have noticed that they would attach it to the walls of the hive, as if expecting to use it later on.

At any rate, our experience, which was gained by a number of years of production on hundreds of colonies, has clearly evidenced to us, and to our entire satisfaction, that the teachings of the masters—who advanced these ideas, let it be remembered, long before the invention of the extractor—are in accordance with the facts. Experience proved that by saving our combs with the use of the extractor, and returning them to the bees the following season to be used and filled over and over again, we could produce more than twice as much extracted honey as comb honey.

Extracted honey is hardly ever less than half the price of comb honey on any market, and very often it may be sold for two-thirds of the value of comb honey. Besides, it is much safer to ship, less easily damaged by railroad handling, and when it has to be kept over from one year to another, the risk of its losing any of its quality or salableness is much less than with comb honey. We know this also by experience, for we have often found it advisable to keep honey from one year to another to secure a greater price for it. In years of great crop the price is low, while the seasons like the present (1898), when the crop seems to have been universally a failure, much better prices may be secured; besides the satisfaction one has of keeping one's customers by being able to supply them.

We have often kept extracted honey one, two, three, and even four years, without loss; while with comb honey the leakage and the danger of the invasion of the moth make it very unadvisable to hold it beyond the season of its production.

But the advantages above-mention are not the only ones that are connected with the production of extracted honey when compared with that of comb honey. A most important point to be considered, or at least one that has had to our mind a great deal of weight, is in the easier and more thoro prevention of natural swarming. When the number of colonies under the control of one man has reacht into the hundreds, the results in honey are of much greater value than the results in swarms, which can only be sold with difficulty. Then, if swarming can be almost entirely prevented much less capital is needed in the way of empty hives. The bees need less watching, and the cost of production is lessened. With large hives, of course, and plenty of room, and a judicious use of shade and ventilation, swarming, even with comb-honey production, may be kept within comparatively reasonable limits, but with an additional supply, liberal and unlimited, of empty combs ready to put on the hive at a moment's notice, there is no need of any fear of swarming except in unusual circumstances, or with careless management.

But to my mind, and with the results of past experience, I cannot too strongly urge the importance of using hives in which the fertility of the queen will have full scope, and supers which will not cramp the bees for space in a few days. One must remember that the little 24-pound super is entirely inadequate for a strong colony that is to be supplied with an unlimited stock of empty comb.

I have no patience with the extracting-super made to fit the ordinary section-case. A super 4¼ inches deep gives too much labor in the handling. The supers that we use with our large hives hold from 40 to 60 pounds of honey, according to the season, for much depends upon how the bees fill them. But one super is not enough, tho in some bad seasons each colony may not fill even this space. We keep an average of two supers or more full of empty comb for each of our colonies, and we have had many instances where even three supers were placed on populous colonies and filled several times over during one season.

Another item in favor of extracted honey is that it costs less labor; for when the combs are once built there is nothing to do in the way of preparation for each crop. The labor of folding sections and placing in the foundation-guides, or strips of comb that are necessary to secure salable, straight combs; the putting in of the sections, the constant oversight to make sure that not too great a number of sections will remain unfinisht and unsalable, the annoyance of seeing a half-filled case deserted by the swarming of the colony are not fully compensated by the comparative profits.

The labor of removing combs or supers for extracting is no greater than the removal and putting in shape of the same crop of comb honey, and extracting is additionally remunerated by the cappings, which, when rendered into beeswax, will go very far towards paying the help employed.

The best grades of honey probably bring the best prices when in the very nicest shape in the comb, but the inferior grades, such as honey-dew, buckwheat, boneset, etc., have no value for the table, and can only be used in the liquid extracted form by bakers, tobacconists, brewers, and others.

C. P. DADANT.

Dr. Miller—The fact is, if every one were to believe with Mr. Dadant—and I wish he were here, as he is one of the nicest men you ever met—if everybody were to believe with him, then everybody would produce extracted honey, and it looks inconsistent for him to urge the production of extracted honey; if he were looking after his own welfare he ought to say, produce comb honey, so he would have the market for extracted honey himself. I suppose there are a

great many different opinions about it. I think some Nebraska bee-keepers will tell you they produce three times as much extracted honey as comb. No doubt they are telling you the truth. There are others, again—I have in mind Mr. Aikin, of Colorado—who will tell you he can produce nearly as much, if not altogether as much, comb as extracted; circumstances are different in different places, and I think it is one of the things that will settle itself, and I doubt very much if it would be wise for us to try to decide, because both extracted and comb honey are needed in the market; like everything else, if I find I can make more money by producing one than the other, I am settled by that, and so each one will settle the question largely for himself.

PRODUCTION OF COMB HONEY AND EXTRACTED.

QUES.—How many are there who produce principally extracted honey and how many principally comb? ANS.—Extracted honey, 3; comb honey, 13.

AVERAGE LIFE OF BEES.

QUES.—What is the average life of the bee?

Dr. Miller—That depends upon what kind of a bee it is; if it is a queen it will perhaps live on an average of about two years. I think there have been some cases in which it has been pretty satisfactorily settled that queen-bees have lived as long as six years. They are often superseded in less than a year from the time they emerge from the cell; sometimes I have had them superseded in a few weeks. Very likely queens are superseded oftener than you suppose. A common thing is for a queen to be superseded after the time of swarming: it may not have occurred to you that every queen that dies in the natural condition of affairs, if you don't meddle with them, is superseded. The worker, in the busy season, will average about six weeks; the life of the worker depends upon the amount of work it does. The drones I cannot tell you much about; they will last usually until there is a stoppage in honey.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

The Wells' Two-Queen System.

Please describe as nearly as possible how the two-queen system is handled and workt by producing comb honey. I would like to try the two-queen system the coming season. NEW YORK.

ANSWER.—I don't know what you mean by the two-queen system, unless you mean the Wells' system, which has been practiced to some extent in England. The main feature is having two colonies side by side in a large hive with a division-board between them, a lot of holes being burned through the division-board, and when the harvest comes the bees have access to the same super. Some like the plan and some don't, and the British Bee Journal thinks it not an advisable plan for the majority. So far as I know, no one has reported a success with the plan in this country.

Varieties of Bees.

1. Kindly differentiate between the following varieties of bees, especially as regards appearance, but also as regards honey-getting and temper: 3-banded, 5-banded, golden and leather-colored Italians, Albinos and Adels.

2. Prof. Cook in his Manual speaks well of Syrians. Do subsequent experiences confirm or disprove his good opinion of them? JOHNNY BULL.

ANSWERS.—1. The original pure Italians that came from Italy were 3-banded, that is, the first three bands of the abdomen next the thorax were yellow; breeders in this country by selection have secured workers with five yellow bands, some having all the bands yellow, these last being called golden. Some of the imported 3-banders are of a darker color, and are called "leather-colored." Albinos among bees are much the same as albinos among the human race—bees which have been so bred that the coloring-matter is somewhat lacking. Adels are bees to which that name has been arbitrarily given, just as you might breed from some of your best bees and call them "Johnny Bull Bees." As to honey-getting and temper, the 3-banders being the most fixt type may be perhaps most generally relied on as a whole class for gentleness and industry, while in the variant types some may be good and others bad.

2. Very little is said about them of late, making it somewhat doubtful as to their confirming generally his good opinion.

Bees Don't Always Die of Foul Brood.

Do all bees that die and have dead brood in the hive die of foul brood? Is the honey fit for family use? I have lost two colonies that way this winter; both had plenty of honey. WASHINGTON.

ANSWER.—No, thousands of colonies die and leave dead brood without there being any foul brood in the case. The honey left in such hives is all right for table use, unless the bees have had diarrhea and have daubed the honey.

Cubic Inches in Eight Frames—Queen-Excluders.

1. How many cubic inches inside the frames of a dovetail hive?

2. What style of queen-excluding honey-board do you use between the hives? IOWA.

ANSWERS.—1. The outside dimensions of the frame are 17⅝ and 9⅛, making the inside measure something like 140 square inches. The width of an 8-frame dovetailed hive is 12⅛ inches, and deducting from this about ⅝ for dummy and space leaves 11½. That makes about 1,610 cubic inches as contents inside the frames.

2. Wood-zinc, when any are used, but no excluders are generally used between my hives and supers.

Substitutes for Natural Pollen.

1. I have five colonies of bees. The queens stopt laying about Sept. 1. Will my bees live till spring? There seems to be plenty alive yet, but there are also lots of dead ones.

2. We have some warm weather just now (Feb. 20), and my bees go to the feed-lot ½ mile away, and carry corn-meal home. Will it do to put a box of meal closer to the hives for them?

3. I will have to feed my bees this spring. Can I put candy or syrup on a stand close to the hives so that they can all help themselves on warm days? KANSAS.

ANSWERS.—1. There is nothing unusual in anything you mention, and your bees will probably come out all right.

2. Yes, it will be a nice thing to give them something of the kind one to ten rods from the apiary. They will probably like it a little better to have ground corn and oats; but as soon as they can get plenty of natural pollen they will pay no attention to the substitute.

3. Yes, put it a rod or more from the nearest hive.

Making Nuclei—The Golden Method.

1. I intend to increase my number of colonies the coming season by dividing. My plan of doing it is this: I have 14 old colonies, and want to increase them to 28 in all. So I thought I would take 14 of my new hives in which I want to hive the new swarms, and make a nucleus in each, by putting a frame of brood and eggs and one of honey in each hive, and then contract the inside of the hive with a division-board so as to keep the bees which I intend to put into the hive confined to the side of the two frames. How many bees will I have to put into a hive? Will a pint or so do? And will these bees rear a queen from the eggs given them? Do you think a nucleus formed in this way will be all right? Would it be safe from robber-bees?

2. In the American Bee Journal of Jan. 5, G. M. Doolittle gives his plan of making nuclei. Is his plan the same thing? There is one thing that isn't clear to me in his article, altho it may be very plain to an expert in bee-keeping. Does he use one of the old colonies in making a nucleus? That is, does he make room in an old colony by using a division-board, and then put the two frames in the place partitioned off, with the rest of the old colony on the other

side? or does he take a new hive? The reason I think Mr. Doolittle makes his nucleus in an old colony of bees is because he says, "The greatest advantage in full, regular-size hives comes in not having our nuclei robbed out occasionally."

3. How long before swarming shall I make these nuclei?

4. I intend to use light brood-comb foundation this year. Do you think it will hold the bees without sagging if I stretch four wires across the frame?

5. In Mr. Golden's articles I see he makes the entrance in the bottom-board of the hive. Would it not also do just as well to make it about five to six inches right above the lower entrance of the hive? Our hives are 14 inches wide, with an entrance cut from the front board at the bottom, the whole length of it. IOWA.

ANSWERS.—1. No, I'm sorry to say your plan wouldn't be all right, for in one respect it would be exceedingly bad. If you put in a hive a frame of brood, another of honey, and a pint of bees, they may protect themselves against robbers, and they will be pretty sure to rear a queen, but the chances are that the queen will be a very poor affair. Don't think of having a queen reared anywhere but in a strong colony, at least until after the queen-cell is sealed. Such a nucleus as you speak of may do providing you give it a sealed queen-cell (you mustn't give the queen-cell till a day or two after the nucleus is formed, unless it is formed from a queenless colony), but it is better to have brood in two frames, a good share of it sealed brood, and enough bees to thoroly protect the brood after the old or field bees have deserted the nucleus and gone back to their old home.

2. I don't think Mr. Doolittle had in mind anything different from a nucleus such as I've been talking about. No, he certainly does not mean to have the nucleus in a hive with a full colony, but means the nucleus alone to be in the hive. I've read over carefully what he says, and I don't see how he could have made it plainer. That not having nuclei robbed has nothing to do with having other bees in the hive; in fact, it wouldn't work if other bees were in the hive. Look on page 2, at the paragraph beginning, "To help the reader to understand," and you'll see that when the nucleus is at the *east* side of the hive the entrance of the hive is entirely closed the whole width of the hive except an inch at the *west* side of the hive. A robber doesn't like to enter at that west side and then run the gauntlet clear across to the east side before reaching anything to rob. I think this idea is original with Mr. Doolittle, and it's valuable.

3. Nothing is gained by beginning too early. Wait till about the time bees want to swarm, at least till they are very strong, and have your queen-cells sealed before forming any nuclei.

4. You will not be likely to have any trouble.

5. I don't know; but in following any one's instructions it's well to follow them to the letter. I have never practiced Mr. Golden's plan, so I cannot speak from experience.

Super Covers—Wax-Scales on Hive-Bottom—Queen Clipping—Stimulative Feeding, Etc.

1. Is it necessary to cover the sections in a super? If so, what kind of covering would you prefer?

2. In using a board cover over the sections, how would it do to have ¼-inch strips nailed or tackt on the underside at each end of the board, allowing a ¼-inch space over the tops of the sections? With such an arrangement would as much propolis be deposited?

3. Are the wax-scales that fall to the bottom of the hive ever used by the bees?

4. Do you use clamps to hold the supers to the hive-body? Do you think it would be advisable to do so?

5. Where could I buy some Langstroth frames with finisht combs in them? and what would such combs be worth?

6. Do you clip the wings of your queens?

7. Do you practice stimulative feeding in the spring?

8. Where so much increase is not desired, would it be safe to unite a swarm with a colony which had cast a swarm some time previously? In such a case would the bees have to be scented? SUBSCRIBER.

ANSWERS.—1. Principally on account of convenience, I prefer to have no cover except the flat board cover of the hive.

2. Such an arrangement would hardly suit you so well as the one in common use. In that the super is made deep enough so that the tops of the sections come within ¼-inch of the top of the super. Less propolis is deposited in a ¼-inch space than in one through which a bee cannot pass.

3. They are probably used in propolizing, for cappings, and for aught I know for building combs.

4. I never heard of any one using them or thinking them necessary.

5. I don't know. I think I have seen them advertised for sale, but not for a long time.

6. One of the first things I do each year after it becomes warm enough to handle bees safely, is to look through each hive to see if its queen is clipt, clipping all found with whole wings, and throughout the rest of the season each young queen that commences laying is clipt the first time it is convenient.

7. Not to any extent.

8. Some have used and advocated the plan, and I think without scenting.

An Electrical Swarm-Notifier.

The enclosed clipping is from the New York Herald of Sunday, Oct. 16, 1898. It refers, as you will see, to an electrical device which announces the advent of a swarm. As I have never seen anything in the Bee Journal about this interesting invention, can you give me any light on the subject? WOODLAWN.

[The clipping reads as follows:—C. C. M.]

What has been called the "pleasant occupation of hiving bees" has been made even more pleasant by an electric invention which obviates the necessity of keeping a watch on the hives at swarming-time.

The basis of the apparatus is the conversion of the wing-motion of the swarm into power. As the bees swarm out they cause two small, easy-swinging doors to open outward. A little hammer, which rests upon these doors when closed and is connected with a battery, drops, as the doors swing open, upon a small metal leaf, and the electrical connection thus effected rings a bell in the bee-grower's house.

ANSWER.—Another correspondent has sent the same thing. I don't know whether anything of the kind has really been tried, or whether it is a creation of some reporter's imagination. It might be difficult to arrange it so the alarm would be given when a swarm issued and only then. For if a mass of bees rushing out should make the bell ring, the same thing might occur if a sufficiently large number of bees were leaving and entering at their regular work. Still, it might be so arranged as to be a success, but I'm afraid the expense would be such as to make it unprofitable. A rather expensive apparatus would have to be attacht to *each* hive. An arrangement somewhat akin has been used to some extent, which has the advantage that one simple arrangement does for a whole apiary. It is one or more wires stretcht, connected with a telephone at the house. When a swarm issues, the number of bees striking the wire gives notice at the house.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. MARCH 30, 1899. NO. 13.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Illinois Foul Brood Bill, we learn from Secretary Jas. A. Stone, of the Illinois State Bee-Keepers' Association, was reported back to the Senate by the appropriations committee, with the recommendation that it do pass. Mr. Stone now wishes us to urge Illinois bee-keepers to talk or write to their senators and representatives, and try to impress them with the importance of this law to give us the protection that we have a right to. We hope that all will act upon this suggestion *at once*. Just overwhelm all the legislature at Springfield with letters, urging the passage of the Foul Brood Bill. *Do it now*, as an adjournment will take place in about two weeks.

Evident Signs of Growth in Bee-Keeping, Editor Root considers the occasional large editions of bee-papers and the increase of subscribers to some of the leading periodicals. Then the dozen supply factories (against the three or four three year ago) are nearly all working on full time, and several over-time. He thinks this tends to show that honey is becoming more nearly a staple.

The Intense Cold Spell the last end of January and first half of February aroused general fears that there would be a wholesale loss of bees all over the country. Fortunately the cold spell was immediately followed in most places by a warm spell that allowed a flight, thus saving the bees.

The Langstroth Memorial.—We have received the following acknowledgement from Mr. Secor:

FOREST CITY, IOWA, March 21, 1899.

GEORGE W. YORK, Chicago, Ill.—

Dear Sir:—Your favor of the 18th, enclosing check for $50, to cover the amounts kindly donated by Dot Contest contributors to the Langstroth Fund, which amount was generously augmented by your own contribution, has been received.

There is in sight about $275 for the Langstroth memorial, which amount ought to erect a very respectable shaft with suitable inscription. I hereby thank every one who has helpt to make the memorial possible.

Allow me to invite suggestions for an inscription to be engraved on the stone.

The following has been prepared by the committee, and is herewith submitted for approval or criticism.

Yours truly, EUGENE SECOR.

The inscription referred to by Mr. Secor as having been prepared by the committee, reads as follows:

Inscribed to the Memory of the

REV. LORENZO LORAIN LANGSTROTH,

"FATHER OF AMERICAN BEE-KEEPING."

By his affectionate beneficiaries in the Art; who, in remembrance of the services rendered by his persistent and painstaking observation and experiments with the Honey-Bee, his improvements in the Hive, and the charming literary ability shown in the first scientific and popular book on the subject of Bee-Keeping in the United States, gratefully erect this monument.

* * * * *

Rest thou in peace. Thy work is done.
Thou hast wrought well. Thy fame is sure.
The crown of love which thou hast won
For useful deeds shall long endure.

"We Be Brethren."—The size of hives has been discust of late in the different bee-papers with much spirit. Editor Hutchinson occupied several pages in copying from Gleanings and the American Bee Journal some of the writings of the chief disputants—Messrs. Doolittle and Dadant—and remarks:

"There is one very pleasant thing about this discussion, and that is that all who have taken part in it are gentlemen. They are fair, honorable, and polite. To me it is a great comfort to argue with such men, knowing that the closing of the discussion will find us still warm friends."

The New British Bee-Papers.—Speaking of journalistic courtesy among bee-papers, the Britishers are not a whit behind their Yankee cousins, if indeed they do not lead. The British Bee Journal, speaking of its new rivals, Bee-Chat and the Scottish Bee-Keeper, says:

"Courteous in tone, and beyond reproach in substance, the respective editors are apparently quite conscious of the fact that successful bee-journalism is only possible when kept clear of personalities, and conducted—as between readers and themselves—in the spirit of gentlemen."

"When Discussion Should be Cut Off," is the heading of an editorial in the Bee-Keepers' Review. Referring to the American Bee Journal, he says that a discussion as to improvement in bees "started a discussion regarding the soundness of evolutionary doctrines. When it reacht this stage, Bro. York thought it had past beyond the province of a bee-journal, and he cut it off. I think he had a perfect right to do this." He thinks evolution, trusts, and a thousand other things that are proper subjects for discussion should not find a place for discussion in bee-journals; that many subjects may be so related to bee-keeping as profitably to be noticed up to a certain point in a bee-journal, and it is the business of the editor to decide when the point

is reacht beyond which further discussion will not yield a profit. He says:

"If I have ever written anything giving the impression that I believed any one who *wisht* should be allowed to write *what* he wisht, and *how* he wisht, and that it then became the duty of the editor to publish it, and to allow discussions to run on and on, and to wander where they may—if I have ever given such an impression, I wish to correct it."

But he believes in giving every one a fair show, and allowing a discussion to go on, even if it does make the fur fly, "so long as *the original subject is kept in view*, and personality and abuse do not take the place of argument, and each round brings out new facts and views."

An Interesting Plan for Conventions was followed at the Brantford, Ont., convention, reported in the Canadian Bee Journal. "The members spoke in consecutive order, and not otherwise unless to ask a question. When all had spoken, or declined to speak, a few minutes were allowed for general discussions. The first question began with the first gentleman in the circle, the next with the second gentleman, and so on all around the circle." So good a plan might well be imported into the lands lying south of Canada.

Amalgamation.—The Editor of Gleanings thinks that now is *the* time for a "wedding" to take place between the National and the "United States Union" (will he please take note that the latter is not a Union but an Association?), seeing that two of the main props of the National refuse to take office again, and that the Manager accepts his office for the last time. It is quite probable that a "wedding" will be announced before very long.

A New Word —**"Alright"**—has been persistently used by one or two bee-papers on this side, and now its appearance in Bee-Chat, an English bee-paper, raises the question whether it is the beginning of another spelling reform, or whether it is a word for which there is some present or past authority.

THE LEAHY MFG. CO.'s catalog for 1899 has come to hand. It quotes prices on a full line of bee-supplies. Their advertisement will be found regularly in the Bee Journal.

EDITOR HUTCHINSON has gotten up a very nice 20-page advertising pamphlet describing and illustrating "Some Characteristics of the Bee-Keepers' Review." A copy lies on our desk, and will be appreciated for its artistic beauty.

* * * * *

MR. W. A. PRYAL, of Alameda Co., Calif., writing us March 16, said:

"We have just had two days heavy rains in northern and central California, and prospects of more. Good crops are assured. The storm may have reacht the south. The rain is worth millions to us."

* * * * *

MR. THOMAS G. NEWMAN, of San Francisco, Calif., writing us March 20, said:

"All here are tickled that 'the drouth is now broken. The whole State is drencht, but in the southern part it is said to be too late to give crops. I hope not. This is a peculiar country, and everything depends upon rain at the right time, else all is lost."

"GOOD THINGS FROM OTHER JOURNALS" is a new department in the Bee-Keepers' Review, to be selected by Dr. A. B. Mason. In this department he selects the items especially to be commended, commenting upon them, and in some cases emphasizing them by giving some of his own experience. In the March Review he makes his introductory bow, and gives place to two items from the American Bee Journal, and one from Gleanings. The first item is that given by Mr. Doolittle on the advantages of using frames of regular size for nuclei; the second by the same man is the plan of preventing the robbing of nuclei (if the reader is not thoroly familiar with it he should at once turn back to page 2 of this journal); and the third relates to the resources of Cuba as related by Mr. Somerford, and it makes the Doctor's head swim to think what big money may be made there by enterprising Yankees.

* * * * *

BRASILIANISCHE BIENENPFLEGE is the name of a monthly bee-journal started in Brazil about a year ago. It is printed in the German language, and edited by Emil Schenk, Curityba, State of Parana, Brazil, South America. Its editor requests us to mention his paper in our columns. While doing this, we might add that it is printed monthly, contains 24 pages, at $1.25 a year, illustrating mostly the Brazilian method of bee-keeping, their different kinds of common and stingless bees, and other things of interest. The principal contributor on our American system of bee-keeping appears to be L. Kreutzinger, 2872 N. Hermitage Ave., of this city, who is also authorized, as seen from the pages of said journal, to receive subscriptions for that paper from the German-speaking bee-keepers of this country.

* * * * *

MR. F. B. MILLS, of Rose Hill, N. Y., is an enterprising seedsman. The 10-cent due bill that he furnishes to all who write him for a catalog, is proving a very liberal offer, and our readers need have no fears that they will be unfairly dealt with. Better send at once for catalog and get a due bill, which will help pay for your season's seeds. The object in making this liberal offer is to induce those not acquainted with Mr. Mills to try his seeds for this season. Mr. Mills feels confident that one season's trial will make a permanent customer. Please mention the Bee Journal when writing to Mr. Mills or any other of our advertisers.

* * * * *

THE INLAND PRINTER, of Chicago, in its department of newspaper criticism, had this to say in its March issue, in reference to the American Bee Journal:

"A careful inspection of the Journal reveals no flaws in its typographical appearance. A most careful attention to every detail is evident."

Coming as this testimonial does, from the leading printer's journal of the United States, we appreciate it very highly, and will strive to merit the good opinion exprest.

* * * * *

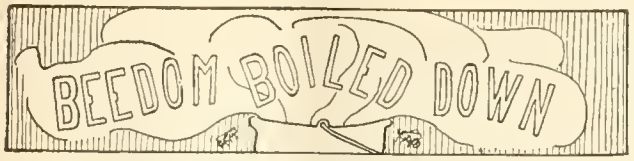
WHAT TO EAT—the appetizing name of a monthly magazine publisht in Minneapolis—devoted a whole page of its March issue to "Honey as Food," copying, upon our suggestion, several pages from "York's Honey Almanac." We wish that more magazines would thus publish the truth about honey. It's a good thing to keep going. Every bee-keeper should get his local newspaper to make extracts from our almanac. It will help their readers, as well as those who have honey to dispose of.

* * * * *

PRES. WHITCOMB, of the United States Bee-Keepers' Association, is called "The king-bee man of Nebraska." At least that is what the Herald, of Chester, Nebr., called him, when giving over a column of an address he delivered on "The Organization of the Honey-Bee and the Relation of Insects to Flowers." We shall expect to hear something of the eloquence of "King-Bee Whitcomb" at the Philadelphia convention, next September. He'd better lay in a good supply before starting.

* * * * *

MR. AUG. J. MUTH, son of the late Chas. F. Muth, of Cincinnati, Ohio, died March 4th. The son had just arranged to continue his father's bee-supply and seed business, but was called away. This leaves the business for sale, as will be noticed by an advertisement on another page. We think it would be a fine opening for some young man with capital and enterprise.



Old Foundation is Still Good, according to G. M. Doolittle, in Gleanings. Feb. 15 he was putting foundation about a year old in sections, and foundation purchast in 1896 in brood-frames.

A Handy Way to Carry Bees, according to the editor of the Bee-Keepers' Review, is to pick up the hive and carry it on the shoulder. This does not apply to hives with loose-hanging frames, and hardly to very large hives. It is especially appropriate for Heddon hives.

Taking Bees Out of the Cellar was discust at the Brantford convention, the prevailing opinion being that they should be put out early—in March or April; some preferring to take out all at once, others by installments. No uniformity of opinion as to whether they should be put on the old stands.—Canadian Bee Journal.

Is Extra Prolificness Desirable?—To the argument that users of small hives never really know how prolific their queens would be if given room, Editor Hutchinson, in the Bee-Keepers' Review, replies that there is no object in having one queen lay so much; the object being a big lot of bees whether from 80 or 100 queens.

To Preserve Fruits in Wax.—Take the fruit a little before it reaches maturity, being careful that it is in every way without bruise or blemish, and retaining the stem. Holding the fruit by the stem, dip it in melted beeswax that is not too hot, and gently remove it. It will have a thin envelop of wax, and if put in a cool, airy place, will keep nicely for several months.—Prak. Wegweiser.

Wax from Old Combs with Solar Extractor.—Editor Hutchinson having said that when old combs are put in the solar extractor, ½ or ⅔ of the wax is lost, O. O. Poppleton makes, in the Bee-Keepers' Review, the following report: Number of combs rendered, 32; amount of purified wax, 9 pounds; amount of residue, 3 pounds, 15½ ounces. He thinks that not a third of the residue was wax.

The Morton Swarming-Pole is figured and described in Gleanings, it being the invention of the late Miles Morton. A square pole slides inside a hollow pole, or long box, 2 inches square and 12 feet long. It is an extension affair, a pull upon a rope sliding the inside pole up, so that it may be made to reach a swarm 30 feet high while the operator stands on the ground. If the swarm is higher than 30 feet, the pole is still a help, for one need not climb so high with the pole as without it.

Varieties in Nectar-Secretion.—F. Greiner gives some interesting points in regard to this in the American Bee-Keeper. Cherry-trees are valuable for honey in Virginia, and almost worthless in Western New York. Apple is better for honey North and South. The great honey-plant, white clover, in his locality yields only enough for brood-rearing three years out of four. O. L. Hershiser exhibited at a convention some white honey which he felt sure was golden-rod, while golden-rod is almost universally considered amber.

Scolding Bees.—Rambler wants to know why it is that when you are at work in the apiary, two or three bees will follow and scold you when it might be a thousand as well. He says if you knock the scolders down, in five minutes another two or three will take their places. Dr. Miller says the *rule* with him is that when the two to six scolders are batted down, peace prevails. Editor Root says he finds it sometimes one way and sometimes the other, but he thinks it is good practice to knock down the scolders.

Do Large Hives Have Larger Colonies in Spring?—A question of fact enters into the large-small-hive discussion. The advocates of large hives say they will have a stronger population in spring. W. Z. Hutchinson, editor of the Bee-Keepers' Review, says this is an unwarranted assumption. For several years he had three sizes of hives—8-frame, 10-frame and 11-frame—and he still uses 8's and 10's, and he is sure that the most populous colonies are not always found in the larger hives. Large-hive men want a hive large enough to fully accommodate the most prolific queen at any time, while he wants a hive large enough to accommodate the average queen. If there is more room in the brood-chamber than the queen will occupy, white honey goes in there that should have gone into the super.

What Darkens Honey-Combs is a matter that has been pretty thoroly discust in Gleanings. Aside from some cases of darkening by pollen, J. E. Crane thinks the first brown color given to the combs is from the cocoon. Dr. Miller thinks Cheshire is right in saying that the darkening is due to the residua of the bowels of the larvæ being plastered outside the exuvium, within the cell-wall. But he thinks white sections in the super, if left on long enough, are darkened by dark material being carried up from below. Both are agreed that the feet of the bees have nothing to do with darkening.

The Curative Properties of Honey are strongly lauded in an item in Centralblatt. A lad had his knee badly injured by falling on a hard object, and the physician said it was a serious matter of several weeks. In spite of the different remedies applied there seemed no diminution of the pain and inflammation. The father then resorted to the use of honey, wrapping well the injured part with it. Within a quarter of an hour after the application the lad fell asleep, peacefully sleeping several hours, and on awakening declared the pain was all gone. The remedy was continued, and in 10 days he was about as usual.

Selling Sections by Weight and by the Piece.—In reply to the proposition of J. E. Crane, that sections should be sold by the piece and not by weight, R. A. Burnett, the prominent honey commission merchant in Chicago, says there are many difficulties and many things to be considered. He says the demand for 14-ounce sections comes from those dealers who want to undersell their neighbors, and yet equal or excel them in profit. He concludes by saying: "We have thought very much on this question, and can never get away from the conviction that the only fair and accurate way is to buy and sell honey by weight."—Bee-Keepers' Review.

Equalizing Colonies Before the Honey-Flow was discust at the Brantford convention, some favoring, some opposing, according to the report in the Canadian Bee Journal. The chairman, Jacob Alpaugh, said:

"I have done some equalizing; that was in times when I did not have as many bees as later on. I believe you can do it to advantage, but you need to be careful; it is worse than spreading brood—to take from one hive and give to another. Go to your strong hive, take out a frame of hatching brood, take it to a weak colony and replace it for a frame that is just full of eggs, and take that back to the strong colony. You will find them both strong, afterwards, and no loss of brood; the same bees are there to cover the same amount of frames."

Is Swarming Contagious?—A good deal of testimony, one time and another, seems to show that it is, and that the excitement of a swarming colony may induce others to issue that would not at least have issued so soon. F. E. Brown reports a case in which he had 18 swarms in the air at one time, all settling in one bunch. One swarm after another settled on a slender cedar-tree 10 feet high, which accommodatingly bent to the ground. Then the bees were put into hives and set on stands, many of them swarming out again as fast as they were hived. This was kept up a good part of the day. The middle of the afternoon the operators gave it up as a bad job and sat down to watch what the bees would do. At 4 o'clock they arose in a body, but instead of sailing off lit on another tree. The air was black with the roaring mass, and bees in hives apparently quiet left brood and honey and joined the saturnalia. As the day waned the bees began going back to their hives, and when account of stock was taken there were 18 new swarms. The next day was a repetition, the 18 swarms being as frantic as ever, and all that spring on heavy swarm days the bees from new swarms would desert, leaving brood and honey.—Gleanings.

Root's Column

40 percent discount on 1898 Fences

—AND—

10 percent discount on Supers packt with 1898 fences

IN ORDER to clean out from our branches all that remain of last year's stock of Fences, and Supers packt with them, we offer them while they last at a sufficient reduction to make them move. Last year's fences, though not perfect, can be used by those who prefer cheapness to perfection. The cleats are ½-inch wide, where we now make them 5-16 and 12 to 2 inches thick, while we now make them 13 to 2 inches. Slats are a little closer together in some cases than this year. These changes are so slight as to be scarcely appreciable in results. There is some stock at all of the addresses given below, which we offer, while it lasts, as follows:

'98 P fences,	60c per 100,	$5.40 per 1000	
'98 I "	75c "	6.50 "	
'98 S "	70c "	6.00 "	
'98 2P or 2I-8 supers,	$1.10 for 5;	$2.20 for 10	
'98 4P or 4I-8 "	1.80 for 5;	3.60 for 10	
'98 AD52P or I-8 hive,	5.00 for 5;	9.00 for 10	
'98 AD64P or I-8 hive,	6.00 for 5;	11.00 for 10	

Usual extras for 10-frame Supers and Hives.

A FULL SUPPLY OF THE LATEST GOODS CAN ALSO BE HAD OF

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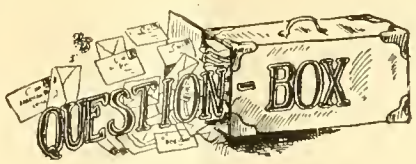


In the multitude of counsellors there is safety.—Prov. 11-14.

What About the "Golden" Comb-Honey Management?

[These questions were sent out and answered before the recent series of articles by Mr. Golden were publisht.—EDITOR.]

Query 89.—Referring to Mr. Golden's comb-honey articles, on pages 481 and 883 1896, and Mr. Hartzell's on page 742 (1897), I would ask you to state briefly—

1. Would you adopt it in preference to older methods?
2. Do you consider it worthy of fuller trial?—S. D.

E. S. Lovesy—1 and 2. Yes.

D. W. Heise—1 and 2. I don't know.

Rev. M. Mahin—1. I would not. 2. It may be.

A. F. Brown—1. No, not entirely. 2. In a measure.

Mrs. L. Harrison—No time to look up references.

Dr. J. P. H. Brown—1 and 2. I have never tried them.

J. M. Hambaugh—1. I really don't know. 2. I can't say.

E. France—I cannot say, as I have not your references at hand.

Dr. C. C. Miller—1. I have not adopted it. 2. I have not tried it.

Emerson T. Abbott—My advice is, let the other fellow do the experimenting.

O. O. Poppleton—I know too little about comb honey to answer these questions.

J. A. Green—1 and 2. The method looks plausible to me, and I consider it worthy of a trial.

S. T. Pettit—1. I never read it in full, so I am not in a position to judge. 2. I don't know.

R. L. Taylor—1. No. 2. I see nothing to recommend in it. Mr. Golden practically acknowledges it a failure on page 742 (1897).

Jas. A. Stone—1. The methods referred to looks reasonable, tho I cannot speak of them from experience. 2. I don't like to recommend what I have not tried.

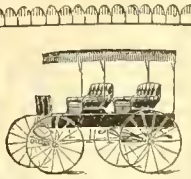
C. H. Dibbern—1. I would stick to such methods as have been most successful with me until experiments with other methods have convinced me that they are better. 2. Yes.

P. H. Elwood—1. Not yet; not having tried it I am not qualified to say much about it. 2. I have not tried it because I thought a fine quality of comb honey could not be produced by that method.

G. M. Doolittle—Nearly all have methods of their own which they consider just a little better than those adopted by others. Golden's methods are good, but mine are just a little better. "Do you see?"

R. C. Aikin—1. No. 2. Probably in a limited way. Let Messrs. Golden and Hartzell get in their 1898 reports.

FROM MAKER TO USER DIRECT AT WHOLESALE PRICES



BUY DIRECT AND SAVE MONEY.

"Money saved is money earned." We make a complete line of Surries, Phaetons, Buggies, Spring Wagons and Road Wagons, and sell them to you direct at wholesale prices

Best Spring Wagon Made.
Two and three seat. Some styles
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C. B. Mastellar, Milo, Kans., writes: "Received No. 928 Combination Spring Wagon in fine shape. Consider I saved $25.00 by dealing with you."

YOU are NOT too far away to do business with us and save money. Send for new illustrated catalogue—FREE. All prices marked in plain figures. Complete line of harness $4.80 and upward.

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JOHN NEBEL & SON,
c 5Atf HIGH HILL, MISSOURI.

Mention this paper.

EVERGREENS

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 25 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

D. HILL, Evergreen Specialist, **Dundee, Ill.**
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The Midland Farmer
(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

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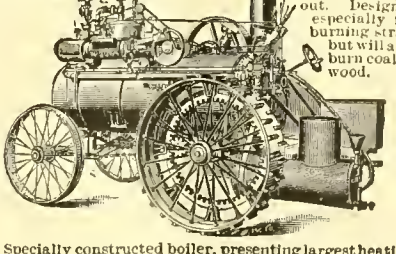
RUMELY
STRAW BURNING
TRACTION ENGINE.



Like all the Rumely engines it is composed of the best material throughout. Designed especially for burning straw but will also burn coal or wood.

Specially constructed boiler, presenting largest heating surface. It is a quick steamer. One of remarkably high power and efficiency, requiring the minimum amount of steam. Five-foot drive-wheels with 16-inch face. An efficient spark arrester prevents all danger from fire. The usual Rumely high finish. We make also other traction engines, portable and stationary engines; the famous "New Rumely Thresher," Horse Powers and Saw Mills. All are fully described in our Illustrated Catalogue—FREE.

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Comb Foundation
Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

GUS DITTMER, Augusta, Wis.
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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.
9A26t **J. D. GIVENS, LISBON, TEX.**
Please mention Bee Journal when writing.

MAKE HENS PAY!
If you want to know how others do this, send for our Catalogue and Poultry Guide. It tells all about the poultry business and about the **CYPHERS INCUBATOR** which embodies all the good points of other machines and the faults of none. Sent freight paid to every buyer. Catalogue 10c. Circulars free. The Cyphers Inch. Co. Box 80, Wayland, N.Y.
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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,
The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
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WE TRUST THE PUBLIC

and send them our Incubator on trial. No man should buy an incubator and pay for it before giving it a trial. You pay not a cent for ours until you have given it a thorough trial. It's made so that nobody can fail with it. A child can run it with 5 minutes attention daily. It beat all others at World's Fair, Nashville and Omaha Expositions. The best catalogue and treatise on Incubation published, sent for 5 cts. Plans for Brooders, Poultry Houses, etc., sent upon receipt of 25 cts.
Von Culin Incubator Co. 5 Adams St. Delaware City, Del.
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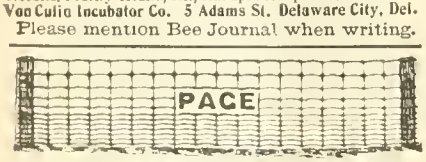

The "Medder Lot"
will soon be needed to "turn into." How are the fences? We make a business of keeping "the old mare" and other stock where they belong.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
Please mention Bee Journal when writing.

Please mention Bee Journal when writing Advertisers.

When Mr. Golden gets past the first flush of enthusiasm to where he can see clearly, he will modify some. I cannot here tell why.

J. E. Pond—1 and 2. Mr. Golden's method is not mine. To my mind it presents no features that are of especial value. Tests may prove it of great value; let those who have time and faith make the tests.

G. W. Demaree—1. Without expressing an opinion as to the practicability of any new or so-called new arrangement in honey-producing, I would be mighty slow to upset a well-tried system for something new. 2. While I have lost time and some money in making *trials*, I am still liberal along that line.

GENERAL ITEMS

Carbolic Acid Instead of Smoke.

I notice some mention of using carbolic acid in place of smoke. Now it seems to me that bee-keepers have enough to contend with without adding carbolic acid to the list, as everybody knows it is very poisonous. Suppose in handling the acid some of it is spilt on the face of section honey. Would it be safe to eat? And if it becomes generally known, will it not be a hindrance to the sale of honey? I think it will in this market.

There are a good many bees kept in this county, but very few in frame hives. I have 18 colonies in 8-frame dovetail hives, part Italians and part blacks.

I ordered one dozen queens last spring, and introduced seven in one apiary without a single loss; five in another apiary with the loss of two.

My 18 colonies are winteriug well on the summer stands, with the exception of some of them being light in stores; but I have frames of sealed honey to give them the first warm day. J. R. ADEN.

Henry Co., Tenn., Feb. 18.

All Right, Let Young America Invent

MR. EDITOR:—It seems to me that you are very wrong in what you say in your editorial headed "Inventive Beginners," on page 24. You credit the trash in the way of poor hives which have been tried and cast aside to *bee-keepers*, and especially to young bee-keepers, when the real fact is that the hives of the Patent Office can mostly be traced to men who never handled bees but were good carpenters and cabinet-makers—men well used to handling tools but not conversant as to the wants of bees. As witness, the hives were mostly built with drawers like a bureau, or were like a kitchen-safe. These hives workt very well for one or two seasons, but the bees glued up the drawers and the hives became worthless to the apiarist.

But there is plenty of room for improvement in the hives now in use in this country, tho our supply dealers are making a very fair hive. You see there is a lot of new bee-keepers coming on every year, and there will always be a good demand for the factory-made hive. But don't you try to stop the inventive genius of Young America in the makiug of hives, to please any gentleman of the Old World. If our Langstroth had confined himself to the systems of our masters we should have been very far behind to-day in the matter of hives, as well as in every other branch of apicultural knowledge. Our Millers, Dadants, Doolittles, Aikins, Aspinwalls, Taylors, and an array of others, ought to have sat down and waited for the masters of the Old

The Best Bargain
IS THE
BEST GOODS AT FAIR PRICES.

And that's the secret of our immense trade that has made us

HEADQUARTERS IN THE WEST

For Bee-Keepers' Supplies. We are ready now for the season of 1899 with an immense stock of the latest and best in our line. Send for our 1899 catalog and discounts for early orders.
Address,

JOSEPH NYSEWANDER,
10ASt DES MOINES, IOWA.
Please mention Bee Journal when writing.

Circulars free. Send 6c. for Illus. Catalog

HATCH CHICKENS
BY STEAM—with the simple, perfect, self-regulating
EXCELSIOR INCUBATOR
Thousands in successful operation
Lowest priced 1st-class hatcher made
GEO. H. STAHL,
114 to 122 S. 6th St., Quincy, Ill

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EGGS FOR SITTING Pure-bred Barred Plymouth Rock, 15 Eggs for $1.00.
Superior Rose Comb Black Bantum Eggs, 15 for $2.00. No other varieties kept.

Italian-bee keepers being men of good taste and sound judgment should beep the best and most profitable kinds of Poultry. Only fresh eggs used, carefully packt and sent by express. Safe delivery guaranteed. **D. S. HEFFRON,**
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SPRAYING
with our new patent
KEROSENE SPRAYERS
Is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best.
THE DEMING CO. Salem, O.
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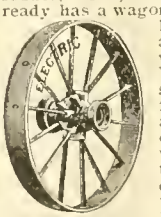
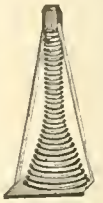
TWO WAGONS AT ONE PRICE.

It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc. The man who already has a wagon may have one of these low handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 16, Quincy, Illinois, for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.



THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me st of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.



Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

World to get through with the straw-skep and the toy hive!

We are very far still from perfection in the matter of bee-hives, and I hope some young apiarist will yet come to the front with the very hive we are all looking for. Our varying climate and ever-changing seasons make it hard to get up a hive to suit the whole country, but let the young and euthusiastic bee-keepers keep on trying. Don't stop them to please any man from across the seas. I know that we owe a good deal to them—to Cowan, Cheshire, Huber, Dzierzon, Swammerdam, Mehring, Bertrand, Hruschka, and others, but not in the way of hives. So let Young America have the tools and let him use them, please.

Republic Co., Kan. WM. EAGERTY.

Season of 1898, Tall Sections, Etc.

We did not have an extra season last year, but did tolerably well. I got 2,500 pounds of honey from 48 colonies, and the increase of colonies a little more than covered the loss. The season was very wet and bees could not do much, but late in the season we got some real nice honey from golden-rod and wild-aster, and the bees filled their brood-chamber so that we did not feed any for winter stores.

Most of the honey we got in the early season was mixt with honey-dew, and was not very nice. I sold most of my honey for 12½ cents, none for less than 10 cents. The honey that was put in the plain sections with fences was real nice, particularly the tall sections, 3⅝x5x1½. I like them better than anything I have used for some time, and expect to use nothing else but plain sections with fences during the coming season.

I was quite amused when I read, on pages 94 and 95, Mr. M. Fouts' article condemning the Danz. hive, tall sections, and the Golden method. I beg leave to differ from Mr. F. in regard to the Danz. hive and tall sections. I have but one of the Danz. hives, but I like it very much; it is true they are a little more difficult to manipulate, but I consider the extra surplus we get more than balances the extra trouble; and the tall sections—well, they just can't be beat. I have no trouble to get bees to work in them; in fact, when fences are used, I believe they will occupy them sooner than they will with the old-time scallopt sections; and, besides, they look so nice, are better filled, and bring a better price; at least that has been my experience.

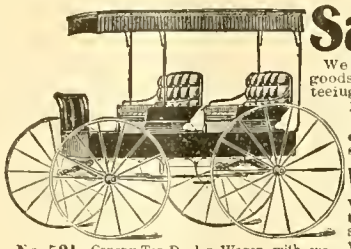
As regards the Golden method, I have not tried it, but I expect to do so during the coming season, if I live, and I will then tell after the season is over how I like it. I shall not condemn it until Dr. Miller and Mr. Doolittle say it is no good.

Rockbridge Co., Va. P. I. HUFFMAN.

An Old Lady's Bee-Experience.

I read an article in Green's Fruit-Grower on how to unite weak colonies. It was to make a small hole in a paper and put on one hive, and set the other on top and close the entrances of the top one and the bees would go down a few at a time. But it would not work for me. In an hour's time there were lots of dead bees on the paper. I had smasht both and taken out the empty frames of both, and caged the one by the side of the other one, bottom-board and all. So when I found that plan would not work, I set it off on the bottom-board, then uncovered both and puft some smoke on both. Each one had four full frames or combs, so I lifted the four out of the one I had on top and put them in the other hive, bees and all, so that made eight full frames. Then I puft some smoke on them and put on the canvas and cover and left them. I did not see any more dead bees.

Each one for a couple of days stayed on its own frames, then they got together in the middle and seemed to do all right. It was the last of September or the first of October, I don't remember which, when I examined them, and they were all right and seemed to be strong. When I last saw one on the porch I thought that that one



No. 521—Canopy-Top Duplex Wagon, with curtains all around, storm apron and pole or shafts. Price $50; as good as sells for $80.

Satisfaction Guaranteed

We feel so certain of our ability to satisfy you both as to quality of goods and price that we do not hesitate to ship for inspection, guaranteeing satisfaction. We are further justified in this position by our 26 years of experience. Could anything be more fair?

We are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively.

WE HAVE NO AGENTS.

We have no desire to increase the cost to you by this or other means; hence we sell you direct from our factory at wholesale prices. We are not jobbers or dealers. We make everything we sell. Largest selection—170 styles of vehicles, 65 styles of harness.

No. 145—Double Spring Wagon Harness. Price $20.75; as good as retails for $25.

SEND FOR LARGE FREE ILLUSTRATED CATALOGUE.

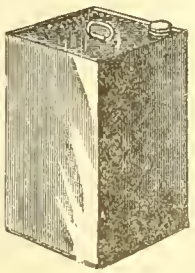
Elkhart Carriage and Harness Mfg. Co., W. B. Pratt, Sec'y, Elkhart, Indiana.

EXTRACTED HONEY FOR SALE.

IN 60-POUND TIN CANS.

ALFALFA HONEY.

This is the famous White Extracted Honey gathered in the great Alfalfa regions of the Central West. It is a splendid honey, and nearly everybody who cares to eat honey at all can't get enough of the Alfalfa extracted.



Prices of Alfalfa Honey.

A sample by mail, 8 cents, to pay for package and postage. By freight—one 60-pound can, 8 cents a pound; two cans, 7¾ cents per pound; four or more cans, 7½ cents per pound. Cash must accompany each order. We guarantee purity.

GEORGE W. YORK & CO., 118 Michigan St. Chicago, Ill.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the LARGEST FACTORIES and the latest and most improved machinery for the manufacture of Bee-Hives, Sections, &c., that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the BEST GOODS AT THE LOWEST PRICES.

Send for Circular and see the prices on a full line of Supplies.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

Listen! Take my Advice AND BUY YOUR **Bee-Supplies of August Weiss!**

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wis.

1Dtf

Doolittle's Book Free!

Every Bee-Keeper should have

SCIENTIFIC QUEEN-REARING.

YOU CERTAINLY will have it if you desire to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may safely introduce any queen at any time of the year when bees can fly; all about the different races of bees; all about shipping

queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, **everything** about the queen-business which you may want to know. The price of the book is $1.00, being bound in cloth, gold-lettered.

We want 1,000 New Subscribers

Between Now and June 1,

And we would like to have our regular subscribers help us in this work. In order that all who may want a copy of Doolittle's "SCIENTIFIC QUEEN-REARING" may earn it very easily, and at the same time aid in swelling the Bee Journal's list of subscribers, we wish to make the following **Liberal Offers**—only to our present subscribers:

Offer No. 1. We mail the book for $1.00, or club it with the Bee Journal for one year—both for $1.70.

Offer No. 2. Send us **Three New Subscribers** to the Bee Journal for the balance of the year, **at 60 cents each**, and we will mail you a copy of the book free as a premium.

Offer No. 3. Or, send us **two** new subscribers to the Bee Journal for the balance of this year at 60 cents each, and 40 cents additional (making $1.60 in all), and we will mail you the book.

Offer No. 4. Or, send us **one** new subscriber for the Bee Journal for the balance of this year at 60 cents, and 65 cents additional (making $1.25 in all), and we will mail you the book.

Now, the sooner the new names are sent in the more copies of the Bee Journal they will get for their 60 cents, and if sent before April 1, each will be certain of getting the Bee Journal for **nine months**, or about 40 copies.

Remember, that only our present subscribers can take advantage of the last three offers above.

Now, let everybody go to work, and help roll up the 1,000 new subscribers.

Address,

GEORGE W. YORK & CO.

118 Mich. St., Chicago, Ill.

might be dead, but it was not. I also united two in that way for a friend that got two colonies in the spring from me, but I have not seen her since I have examined mine. I will after this treat all weak colonies that way.

I find the American Bee Journal a very useful help to anyone that has bees. I would not like to be without it now, as I know how helpful it has been already to me. I have been in the bee-business three years, bought one colony and took two on shares a year; now I have 11 and sold 4. I have lost one during this last cold spell. I had it on the porch sheltered from the north and west. I put it there because I thought it would need attention. The 11 outside I examined yesterday, and they seem to be in good condition, so I think they will come out all right.

I like to work with the bees. I have a large box put over a part of the hive, and hay stuff in between the hive and box, a cover over it, and a good cushion in the top part of the hive. Some with fodder around all but the entrance, and tied over the top. All seemed to be doing well. As I don't have the money to buy hives, I made all I have used. I make them in the winter and paint them, and have them ready when I need them. For the frames I get strips sawed and planed at the mill and nail them myself. I space them by driving a small nail in the edge of the frame near each end, the first one on each side to go against the hive, and on the other side for the next one to go against; and the same with the rest on the one side, so they will stay the proper distance.

I buy dry-good boxes and rip them up in the proper depth for the hive, then saw them the right length, then nail them together. I do not spare nails where they will do any good, so they are strong and good. What isn't thick enough for bodies I make tops and bottom-boards, and what won't do for them, I make frames to set the hives on. I don't have them on benches, so I use the lumber up close. The boxes are planed and grooved so a seam doesn't hurt them. If there is a nail-hole, or anything, I putty it before I paint it. For one box I paid 25 cents, and made what I would have had to pay $1.50 for, if I had bought the bodies. I ript the boxes and sawed them up, and made six bodies ready to paint in one day. Don't you think it pretty good for a woman in her 70th year? The sawing and nailing was good exercise during that cold weather we have had. I have made 26 bodies, tops for all, a lot of bottom-boards, and a lot of frames to set the hives on; and almost all are painted, and all the pound boxes ready that I will need, and other things ready, all this winter. So I will not have anything that way to do when I need them. I credit the bees for all I sell from them, and charge them with all I buy for them. I have on hand more than I will need all summer, except some more of the foundation for the bodies. All I have on hand, and all I have used, don't come half way to what I made from them last season. MRS. SARAH I. GRIFFITH.

Cumberland Co., N. J., Feb. 27.

Successful Wintering of Bees.

I feel as if I would like to "speak in meeting," as I see others are giving their testimony on the line of out-door wintering of bees. I have had but three years' experience in this direction, but they have proven successful. The hives I use are the Bay State or Alley, and Dr. Tinker's pattern. They are mostly of the Bay State make, 8 frames with closed ends.

In preparing for winter I put the hives in rows running east and west, fronting to the south. I put down on the ground 2x4 scantling, raising them an inch or two higher. On these I put a board or two running lengthwise; this constitutes the platform on which the hives are to rest. I commence at the east end of this platform, storing away my bees for winter. I leave a space between each hive, from 4 to 6 inches. After all are thus placed, I lift the covers and pack with 2 inches of straw all

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around the brood-chamber, and put 4 inches of straw on top, and then put on the covers. Then I pack straw in between each hive, taking pains to pack it solid. Then I bank the hives on the north side with straw 10 or 12 inches deep, putting some pieces of boards or sticks to hold it down. I then put about 4 or 6 inches of straw on top and cover this with boards, leaving the front of the hives exposed.

This winter, a part of the time, the hives were invisible; snow had drifted and completely hid them. March 2d I shoveled away the snow, and as I cleared the snow from the entrance there came the old familiar bz-zeez; 20 colonies thus responded all in the row. I thought that pretty good for this frozen region, where the mercury went down to 52 degrees below zero.

My bees have had two or three flights during the winter. Thus I have wintered my bees successfully out-doors for three winters. I think they have come out fully as well in the spring, if not better, than those I wintered in the cellar. I think that bees generally are wintering well in this locality.

L. ALLEN.

Clark Co., Wis., March 4.

Texas.—The Texas State Bee-Keepers' Association will hold its 21st annual convention at W. R. Graham & Son's, Greenville, Texas, the first Wednesday and Thursday in April, 1899. All interested are invited. No hotel bills to pay.

W. H. WHITE, Sec.

Utah.—The Utah Bee-Keepers' Association will hold its regular semi-annual convention April 8, at 10 o'clock a.m., in the city and county building, Salt Lake City. A full program in the interest of the industry will be presented, and all bee-keepers are cordially invited. Among the subjects to be considered will be the purchasing of supplies, the disposal of our products, and the best method for the protection of the industry. It is desirable to have every county represented, either personally or by letter. Questions are solicited.

Mill Creek, Utah. J. B. FAGG, Sec.

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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E. T. ABBOTT, St. Joseph, Mo.
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G. B. LEWIS CO., Watertown, Wisconsin.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, March 21.—Fancy white, 13c; No. 1, 11@12c; ambers, 9@10c; dark, 7@8c. Extracted, white clover, 8c; other klnds, 7c; amber and dark, 5@6c. Beeswax, 27@28c.

There is no change of consequence since our last quotations. Stocks of the best grades of white comb are being reduced, and receipts are light, with some accumulation of the off grades, there being additions to those grades from time to time. R. A. BURNETT & Co.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c.

M. H. HUNT.

KANSAS CITY, March 10.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.

C. C. CLEMONS & Co.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 15.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7½@7½c; light amber, 6½@7c. Beeswax, 24@26c.

Present slim stocks admit of only a light jobbing business being transacted, with values much the same as previously noted. The coming crop is likely to be small. The bees are now being fed in a large portion of Southern California, and many are reported to have already died.

BOSTON, March 10.—The demand for comb honey is very light, with full stock on hand. We quote our market: Fancy white, 13@14c; A No.1, 12c; No. 1, 11@12c; light amber, 9@10c. No demand for buckwheat. Extracted, white Northern stock, 7@8c. Beeswax quiet at 27@28c.

BLAKE, SCOTT & LEE.

OMAHA, March 13.—The stock of comb honey in this market is very light. There are not over 300 cases of all grades in first hands. Demand continues fairly active. Fancy white quotable at 13c; choice, 12c; No. 1 amber, 11c. Extracted well cleaned up. PEYCKE BROS.

BUFFALO, March 10.—There is only very little dark poor honey in our market, which is selling at mostly 8 cents. Some strictly fancy white comb honey would bring about 12 cents. Little, if any, here. No extracted to mention. Fancy pure beeswax, 30c BATTERSON & Co.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

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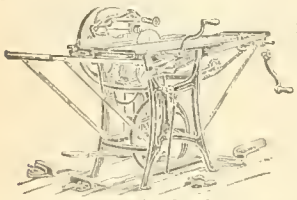

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To say to the readers of the BEE JOURNAL that

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has concluded to sell **QUEENS** in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
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1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00
Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, **the very best**, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

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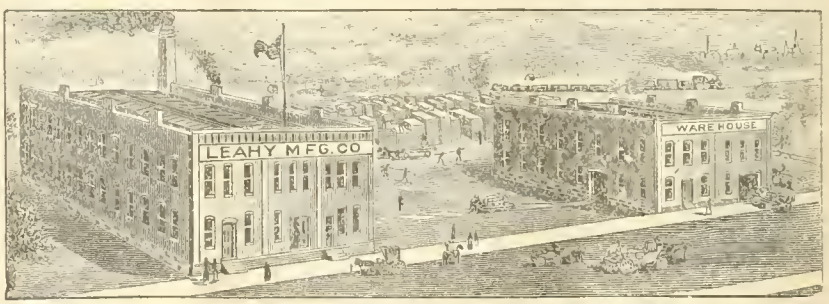

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., APRIL 6, 1899. No. 14.

CONTRIBUTED ARTICLES

Something About Handling Hoffman Frames.

BY C. DAVENPORT.

LAST season a bee-keeper came from quite a distance to visit me. I was very busy at the time, and upon his departure I told him I was sorry that it was not so I could have given him more time. In reply he said, in effect, that what he had seen me do would be worth a good many dollars to him, as the way I handled Hoffman frames was a revelation to him. Altho sincere in what he said, he of course exaggerated the matter, but as Hoffman frames of late years have probably had a larger sale than all others combined, I am going to say something about handling them, for many who have them consider it a difficult matter to handle them rapidly.

I consider self-spacing frames of some kind (if hives have to be moved to and fro from out-yards) as the only kind worthy of being considered, and even if hives are to remain in one yard permanently, I think self-spacing frames far superior to loose-hanging ones.

I have tried a good many kinds of frames, and frame-spacers, and as I believe I have before said, I prefer the Hoffman frames above all others, and I do not think there is any locality where propolis or bee-glue can be much worse, or more plentiful, than it is here. I prefer, tho, to have both sides of the projections on the end-bars square instead of having a V edge on one side, as this V edge allows and causes much more glue to be put between these end projections. It is claimed that with these V edges there is much less danger of killing bees when the frames are handled rapidly, but any one who has had many of these frames in use for a few years in a locality where propolis is plentiful, knows that in actual practice this is not the case, for glue will be stuck on and around these V edges until they are as wide and fully as apt to catch bees as square edges are; and as for cleaning or keeping the sides of these V edges free from glue, it is entirely impracticable in a large way, but both edges of these end projections must be occasionally cleaned of glue, or in time it will cause them to space so wide that the frames alone will hardly go in a hive, to say nothing about the division-board with a space back of it; and the main advantage of square edges is that they can be more easily and quickly cleaned. In theory it would appear the other way, but in practice it is a hard matter to quickly and effectually clean these V edges without danger of splitting or removing some of the wood. But so far as they, on account of having more glue on them, make it harder to separate the frames, this is a small matter, for no kind or quantity of glue can be put on the end-bar projections that need materially affect the ease or rapidity with which the frames can be handled, excepting the occasional cleaning of the edges I have mentioned, and if they are handled rightly to start with, this will not be necessary excepting once every few years, for in practice I have failed to see that wide spacing, up to a certain extent, does any harm, but while glue cannot be put on the end-bars so as to cause much inconvenience, here it is sometimes put on and around the ends of the top-bars to such an extent that sometimes in old hives with wood rabbets the ends of the top-bars have broken off before they would loosen. But with hives that have improved tin rabbets, I have never had any trouble in this respect.

The main reason of my success in easily and rapidly handling Hoffman frames is due to a special tool which is made from a piece of steel about 10 inches long, 1½ inches wide, and about ¼ of an inch thick. One end is spread out a trifle and drawn down thin; the other end has a piece on each side cut off in order to bring it down so that it is only about ¼ of an inch wide. The point is then bent at a right angle ¾ of an inch from the end. When one opens a hive with this tool in hand it is an easy matter to remove any frame—propolis cannot stand before it.

Yucca Plant of California—See page 211.

For instance, if one of the center frames is to be removed, the wide end is inserted between it and the next one, and the rest of the frames including the division-board are shoved over *en masse;* while the hook on one end is

sometimes very convenient for pulling out a division-board or frame, if glue has been allowed to accumulate on the end-bars until there is not much vacant space left in the hive. Its main advantage is that the tool can be hookt or hung on the edge of the hive after the frames have been loosened.

At the time the visitor I mentioned was here, I was making artificial swarms from some hives containing Hoffman frames, and some from hives with loose-hanging frames. In each instance this necessitated removing all the frames, shaking the bees off, and replacing the frames in the hives from which they were removed. He timed me on a number of hives, and said with Hoffman frames it took me from 1½ to 2 minutes, while with the loose-hanging frames it took from 3 to 4 minutes. This difference was owing mostly to the time it took to space the latter.

With me nails and staples have not proved very satisfactory as spacers; still, there are many who prefer them and object to frames that require the use of a tool to loosen them, but here some kind of a tool is necessary anyway to loosen covers and supers.

Shortly before a swarm is put into a hive containing Hoffman frames, I drive a wedge that fits very tight between the division-board and the side of the hive at each end opposite the end-bars. When this is done, if the frames are made true, it spaces them accurately at the bottom, and by turning the hive bottom side up the frames can be pulled into exact position endwise; and if the wedges are tight enough they will remain so. When this is not done some frames are liable to be a good deal out of position endwise, and after the comb is built they will remain so, and be a continual nuisance, for one end of the frame may be so close to the end of the hive that it will be fastened there, while brace-combs may be built at the other end. As combs are something that, barring accident, will last nearly a lifetime, it pays well to take pains to secure straight combs in frames that are held true in the hive.

Southern Minnesota.

Bee-Keepers' Mistakes in Colorado—Foul Brood.

BY "INSPECTOR."

MY neighbor S. had 3 colonies of bees. He called in early spring at my house to get a few sections. Of course we talkt bees, then I showed him my vat for steaming hives and melting wax.

"I have a few old combs you may have for wax," he said. "Send your boy down and get them."

When the lad returned I saw the evident signs of foul brood, and dispatcht the boy with a note to my neighbor warning him of the danger of letting the bees taste of the honey in the hive from which these combs came. But my caution was too late; the bees had been allowed to clean up the honey daubed on the hive, and the best combs had been placed on the grass near by, so the bees could clean up the honey. Several weeks later the inspector found a large colony foul in this yard.

Near the close of the honey-flow a lady desired her two bee-hives examined. The first hive held a late swarm, but tho light it seemed healthy, while 8 or 10 foul-broody combs lay under and against the hive. Ten feet distant stood the parent colony, heavy and populous, with 28 sections well filled with honey, but with the center combs of the brood-nest foul.

My German friend stopt me in the road—"See here, you go *right past* my house. I want you to look at *my* bees."

"I will call Saturday."

"All right; I'll be there *sure*," said he.

I came, found L. anxious to learn all about the bees. The first hive was clean, and the brood nice. I said, "Now you see the eggs here, and also the young larvæ so white, and even the empty cells are clean, and shine, all ready for the queen to drop in the eggs."

"And here is the queen, you see."

"Ah, sure! but isn't she a fine one?"

"In moving these combs I will cut out this honey built fast to the side of the hive. Now can you get another frame to put in?"

"O yes, I have some frames of comb upstairs."

This was brought, and on examining found to be foul. We carried it to the window, and the shrunken cells were pointed out, the cappings with the tooth-pick holes and the dried, coffee-colored matter on lower side of the cells were all explained.

"Well," said my friend, "if this is the disease, then that hive under the willow has it, *for I put some of these combs in that hive when I put the swarm in.*"

"We'll go and see," said I. "You handle the frames and I will use the smoker, while you see if you can find the disease."

Lifting a frame from the center of the brood-nest, he soon discovered the cells containing the foul and ropy matter. "*I know what foul brood is,*" he said; "and now when I understand how to treat the hive, I shall be able to avoid such a state of things hereafter."

Several weeks afterward we met, and when I spoke of the importance of bee-keepers becoming fully informed regarding the danger, he replied, "O you are doing lots of good; I would not take $25 for what I learned of you."

One yard of about 50 hives was found where a dozen foul hives were emptied and spread over the ground, and thousands of bees were crawling over them. The result of this mistake was the ruin of one-half the bees, and no surplus for that year.

Another yard of 10 or 12 colonies were all diseased but 4. The yard was cleaned, wax melted, and bees that were saved did quite well; but at the end of the season an old hive was found back of the house in the brush; it was dead and foul, and when the cover was lifted several bees flew out.

Large Hives and Small Hives—Swarming.

BY EDWIN BEVINS.

BEFORE proceeding with the subject upon which I intend to write, I wish to say that I approach it with some hesitancy because I presume Mr. Coverdale to be a bee-keeper whose experience antedates mine, and covers a far greater number of colonies than I have yet handled. I will venture, however, to submit a few thoughts suggested by his two articles giving an account of his experience with 10 colonies in 2-story hives, on pages 805 (1898) and 67(1889.)

What strikes me most forcibly is the *seeming* inadequacy of his motive for making the experiment. I say seeming inadequacy because it may be that Mr. Coverdale had motives not avowed, and, again, it may be that I have not a full comprehension of the one avowed. The chief purpose of the experiment, if I gather it rightly, was to learn if the colonies in the double-deckers would swarm as much as colonies in hives of one story. I think he manifests a little surprise that they *did* so swarm, and then he goes on to outline the condition of these colonies, and gives the conditions under which colonies in *any* hive, whether in large or small single-story hives or double-deckers, may be *expected* to swarm. With brood-chambers full of brood and honey, queen-cells present, weather propitious, and a honey-flow on, what is there to look for but swarming, unless the bee-keeper himself intervenes?

It seems that Mr. Coverdale did put on supers at the time the second stories were placed under, but the giving of room above cannot be relied upon to prevent or even retard swarming under all circumstances. With honey enough in the hives to keep brood-rearing going on, and not enough coming in from the fields to start work in the supers, queen-cells may be started, and then it is my experience that swarming preparations will not be abandoned when the flow comes.

My experience with two-story hives is limited, but I have thus far been unable to get much work done in supers placed on top of them.

Contrary to the advice and practice of most bee-keepers, I use hives of six different sizes. The smallest size I use is the 8-frame dovetailed, and I have a larger percent of swarms from these than from any of the larger sizes. The larger the hive the less swarms has been the rule with me. (I will remark here in parenthesis that I do not find any great disadvantage or inconvenience in the use of so many different sizes of hives. My aim is to have enough for a little apiary of each size, and so determine sooner or later which is the best size for me, with reference to both the honey and the wintering problems.)

With regard to swarming, I think the trouble with the small hives is that queen-cells are started before they are started in the larger hives that give more breeding-room for the queen. After these cells are started, room above cuts no figure. The bees will continue their swarming preparations even tho work should be begun in the supers.

In the larger hives queen-cells not being started so soon, the honey-flow may come before any *are* started, then work will be begun above, and perhaps no swarming prep-

arations made. To me, the idea that the size of hive makes no difference with the swarming is a mistaken one. I am willing, however, to say that at almost any stage of the game, when honey is plenty in the blossoms, and weather favorable, the conditions can be changed so as to bring about swarming preparations. Let storage-room above be withheld, and the brood-chamber become congested, and it would not be surprising if some of the bees should get the idea in their heads that they would like to start house-keeping in more roomy quarters.

One remark of Mr. Coverdale's enables me to understand why I lost one of the largest swarms I ever had or saw. It issued from one of my biggest hives, and I reasoned that if I should hive this big swarm in an 8-frame dovetailed hive and put the super right on, I should get a big lot of section honey right away. But the swarm left in a little while after it was hived.

Mr. Coverdale has, it seems, made the discovery which Mr. Hutchinson made years ago, viz.: That bees with *young* queens are not likely to swarm. Did the behavior of the bees from those 50 queens he introduced without a loss have anything to do with the discovery? I will indulge the hope that Mr. Coverdale will give us the method of introduction in time to be of service the coming season.

Having occupied the stand longer perhaps than is becoming, I will retire and make room for some one possessing that "further knowledge," of which Mr Coverdale speaks.

Decatur Co., Iowa.

The Yucca Plant of California.

BY W. A. PRYAL.

THE yucca is a rather odd plant; it is also called Spanish bayonet and Christ's candle-stick. It is quite common in the waste places in Southern California, especially in the desert portions. Several varieties are to be found in gardens where it can be protected from severe weather.

The flowers are numerous, drooping and pretty. I have not observed it sufficiently to state whether it is much of a honey-producing plant or not; however, the bees work in-

Yucca Bee Brush

dustriously upon its blossoms. I think it was Mr. William Wallace Bliss, of Los Angeles Co., Calif., who made raids on these plants in the desert places out near the Mojave desert, to obtain the leaves for bee-brushes. Where joined to the trunk these leaves are very fibrous. By cutting them off so as to get four inches of this fiber they may be made into a very soft and serviceable brush for getting bees off combs and other purposes where a small brush is required. The plant is an ornament worthy of any garden.

Alameda Co., Calif.

Teaching Chickens to Eat Drone-Bees.

BY W. W. M'NEAL.

I ONCE had a young Brahma rooster whose mind was so great that he appeared never to be happy unless diagnosing a piece of drone-comb containing nice, plump larval drones. The pleasures of the barn-yard, or a stroll in the wood-lot, were of small moment to him after having dined on drones, so I accordingly took him in as a "full member," and called him "Jim."

Now Jim was very young at this time, and would often get lonesome; but to "cluck" to him softly at every such time—which was too frequently the case when I was busily occupied with the combs, for instance, hunting a shy queen—was more than I could stand. To just whistle was so much easier, so I concluded Jim had best learn to catch comfort and consolation from that, and he did. In a very short while he knew the call so well as to come running to me from any part of the bee-yard at the sound of it.

The chicken grew nicely on a diet of drone-bees, and I had much amusement with it. But there came a time one day when I forgot the presence of the pesky rooster, and stood a frame containing a beautiful comb of just-capt worker-brood down on end against the hive. Jim "didn't do a thing" to that comb, as the saying goes. When I turned to take it up again he was wiping his bill on the grass. He had one square meal on white, juicy bees. I tried hard to forgive poor Jim; but when he shook his short, downy tail and lookt up at me with a sort of sleepy squint in his eye, as if to say, "Much obliged!" I said right out loud that I would break him of eating *worker*-brood.

This was not difficult to do. As soon as his crop had lost its prominence, I took a couple of imperfect combs, one containing worker-brood almost ready to emerge from the cells; the other large, rounded drone-brood. A few mouthfulls out of the worker-comb did the work. The difference in size of cell, and the boiled-down taste of the occupants of the smaller cells, soon had him fully in line.

Delicacies in the manner spoken of could not be furnisht at all times, and then more mature drones would be substituted. In a little while other chickens began to "catch on," and large numbers of drones were caught at the hive entrance, and upon returning to the hive after a play in the open air. Standing within a few feet of the hive, they would dash up to the entrance, seize a drone, and then hie away to the currant-bushes with a worker-bee on their soft, downy back. This makes the bees very bad about stinging the newly-hatcht chicks; so I endeavor to keep these out of the apiary till they are several weeks old.

When a dozen or two of the chicks are in the yard looking for the bee-moths, the unwelcome visitors have to get out of their hiding-places in the grass and go. Chickens should not be allowed in the apiary during cold weather. Their scrathing and picking around the entrances to the hives disturbs the bees not a little. Then if the apiary be protected from the wind, and the day clear, yet too cold for bees to fly, chickens are very apt to jump on top of the hives, thereby causing many bees to leave the cluster and perish

Scioto Co., Ohio.

Spring Work in the Apiary.

BY F. A. SNELL.

IF hives, surplus-cases, honey-boxes, and other supplies have not been secured or made up during winter, this should be done now, and the hives, if procured in the flat, should be put up and painted two coats. I have found pure white lead and oil to be the most satisfactory for this purpose, and the color just what I want.

In putting the hive-bodies and brood-frames together, one should see to it that they are put up square, as should be the surplus-cases and honey-boxes. In fact, do all work to the best of your ability.

The foundation starters or full sheets, as may be preferred, can be put into the brood-frames and honey-boxes if one has a room warm enough at hand in which to do it. To do this work properly, the temperature should be from 80 to 90 degrees, which softens the wax, making it pliable.

All hives and other things likely to be needed should be in readiness before the surplus honey season arrives. The supply should not be scrimpy, but enough for a good season. In case the season is only fair, and the supplies not all needed at the time, the goods will keep with very little loss; but if one is short, in the hight of the season, the loss so incurred is often a serious one, and should be avoided, which can only be done by a generous purchase of supplies during spring or earlier. The honey-flow sometimes comes with a rush, as those experienced well know. If one has to send off for supplies, the honey-flow may be over before the goods are received, and the apiarist be left to mourn over the lost opportunity to get a good crop of honey. Bee-keepers err more in not having sufficient supplies at hand than in any other direction.

During March, in our latitude, the bees do not need a great deal of attention, if they had an abundant supply of honey when winter set in. If any are short of stores, the first warm days should be improved in supplying them with food, and for this purpose nothing is as good or as handy as frames of honey, which should be kept in reserve for such purpose. The frames should be the regular size used in the brood-chamber.

During April the warmer weather permits the bees to fly more, and more bloom is present, brood-rearing increases, and the apiarist is rejoiced to hear the more frequent merry hum of his bees. If any colonies are running short of stores, such should be given. Watch should be kept for queenless colonies, and if such are at hand they should either be united with a colony having a queen, or a

queen given, if a good force of bees is present; the latter is often preferable.

Our bees are generally taken from the cellar the early part of this month, the time depending on the season or weather. On removing bees from the cellar it is preferable to give each colony its old stand. All dead bees and litter not cleared from the hives the day put out, which should be a mild one, with the temperature 50 degrees or more, should be removed by their attendant at his earliest opportunity. The hive-entrance should not be large, and depend upon the strength of the colonies; I find from one to three inches about right.

The hives should be as warm as they can well be made to conserve the heat so essential to brood-rearing. No upward ventilation should be allowed, as that would allow the heat to pass off. All these little things should be lookt after.

With the advent of May we usually expect quite nice weather for our bees. Fruit-bloom usually comes during this month, and with good weather bees make great progress in brood-rearing; the queen lays at a rapid rate; the circle of brood is spread, and good colonies should have brood in all, or nearly all, the combs in the hive. This month's work in each colony lays the foundation for that colony as a factor in securing the honey harvest from white clover, whether it be good or poor.

At the close of apple bloom we have a slack in the honey-yield. As stores are rapidly used up during heavy breeding, the stores are liable to run short, and the bee-keeper should watch his bees closely at this time, or they may slack up brood-rearing, or even starve, especially if bad weather follows. Brood-rearing should not by any means be allowed to slacken for want of stores. Each colony getting short should be given frames of honey, if at hand, or fed in some way. A very few days' neglect may result in much loss.

Of all times in the season, this is one that the queen should be kept most busy, and the rearing of brood encouraged to the fullest extent possible; and it can only be done when a full supply of food is at hand for the bees' use.

Should any colonies, during this month, be found queenless, they should be duly cared for as stated herein. If any colonies died during winter, the combs and hive should be well cleaned of dead bees, and closed up, if not done earlier.

All these little matters need our attention, and our success depends largely upon our diligence and watchfulness.

Carroll Co., Ill.

Honey Candying or Granulating—Reliquefying.

BY H. P. WILSON.

THERE has been a good deal said in the American Bee Journal and in bee-books about candied honey. It is claimed by some old experienced bee-keepers that it is a sign of good, pure honey to candy readily. That may be true, and no doubt it is so far as their experience goes, but my experience doesn't exactly run in that channel. Different climates, and also the source from which the honey is gathered, may make a material difference.

With us the early-gathered honey has never candied in the combs, while that gathered late in the season candies readily. Two years ago I had quite a nice lot of honey, and some of that gathered late in the season was quite solid in the combs in three weeks after being taken from the hive, while all that which was stored early enough to become thoroly ripened before the cool fall weather commenced, did not granulate at all, altho nearly one-half of it was kept over and sold the next fall and winter.

This past year's honey has not candied any yet, and I account for it from the fact that the honey-flow stopt before the warm weather did. That is, there was sufficient warm weather after the honey was stored to ripen it well. This, however, may not be the sole reason. There may have been a difference in the weather, or in the nectar from which the honey was gathered. The flora, however, was the same each year. I am led to believe from experience that good, well-ripened honey is slow to candy. This may to some extent depend upon the sources from which the honey is gathered.

As to adulterated honey candying, or not candying, I have no experience—in fact, I don't know anything about glucose. There are but two sources from which honey is gathered here to amount to anything—basswood and golden-rod—very little clover of any kind here, and no buckwheat.

I have never extracted any honey. When it candies in the combs I cut up the combs and put them in a pail and set the pail in a pan or basin of water on the stove, dropping in some small sticks from ⅛ to ¼ of an inch thick between the bottom of the pail and the basin. Then I heat the water till it boils, and when the combs are all melted I set the pail away to cool. The beeswax will form a cake on top of the honey, and if there is any pollen it will adhere to the wax, and when taken off the pure honey is left. Any water that might be in the honey is driven off by the heat. I also treat many of the unfinisht combs in the same way.

Honey that has once granulated is apt to granulate soon again. Candied honey is melted in the way above stated. There is no danger of the honey being injured by heat. You may boil the water around the pail containing the honey as hard as you can, and the honey won't boil, because it is heavier than water, and won't boil at the same temperature.

I use from two to four quart pails for melting. Honey that has candied in glass-jars can be melted in the same way, only be sure to set the jar in while the water is cool, and let it heat gradually. Don't try to melt candied honey by setting the pail, or jar containing it, back of the stove or near the stove, for if you do you may forget it and scorch the honey on the side next to the stove.

Pembina Co., N. Dak.

The United States Bee-Keepers' Association.

BY "KNICKERBOCKER."

THERE is an adage somewhat like this, "If it is a good thing, push it along." Now this is just the thing that bee-keepers in general are not doing. The United States Bee-Keepers' Association should have more names of good bee-keepers upon its roll of membership. "The butchers, the bakers, and the candlestick makers," each has its association, and holds its convention to discuss business affairs for mutual benefit.

The city of Sioux Falls could not accommodate all the members of the butter-maker's convention which was recently held at that place. If there are 300,000 bee-keepers in the United States, we surely ought to have amongst so many several thousand members in the United States Bee-Keepers' Association. If we had the large membership we deserve, we of course would have a large treasury, and with a good financial backing the Association could advertise, and, as Dr. Mason suggested, put an expert salesman on the road, representing it, and help the pursuit in different ways.

I think the present members ought to have more "hustle" about them in getting new members. There is, however, one class of bee-keepers for whom the United States Bee-Keepers' Association has no time to spare. They are those beginners who are always tantalizing the genial Dr. Miller in his "Answers to Questions," by asking questions the answers to which may be found in any book treating on the subject. Every one who wants to keep bees must have a book. The book comes first, the bees second, and the paper third. If one follows this order, and if at the end of a year he is still enthusiastic on the subject, then he is a fit member for our United States Bee-Keepers' Association.

There is another thing that we bee-keepers can do to help each other and the business. Not so much for the bee-papers, but for any periodicals. Good, plain articles showing the healthfulness and cheapness of honey as a regular diet. Good articles are sure to be copied, and in a year the whole country could be wakened up to see the value of honey as a regular food. There would be a tenfold increase in the demand if this were done.

The bee-papers should be the medium for obtaining new members for the United States Bee-Keepers' Association, and the family newspaper the medium for introducing our product.

Turner Co., S. Dak.

[We wish to endorse most fully the suggestions contained in the foregoing. All are excellent. If every one of our readers should read them over about four times, and then try to act on such as they can, we believe the beneficial results all around would be wonderful during the year, just as the writer has said.—EDITOR.]

The Premium offered on page 222 is well worth working for. Look at it.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 198.]

WHY BETTER QUEEN REARED IN STRONG COLONY?

QUES.—Why is a queen better when reared in a strong colony than in a very small one?

Dr. Miller—When I first commenced keeping bees I learned that you could rear queens in a small nucleus, and I took all the advantage of that I could, and reared queens in a nucleus of one frame, sometimes, and only a few bees. I would not give you a cent a bushel for the kind of queens I reared then. I'll tell you of one I reared, a queen that laid one egg and then died; that one egg was reared in a queen-cell; either the bees or she knew that she was not of much account. I am not sure whether I can fully answer the question. I suppose one of the reasons that a queen is better when reared in a strong colony than in a small one, is that in a strong colony the young larva has all the food it needs, all the heat and care it needs, and in a weak nucleus it may be chilled and fall short of provision. I think the feeding perhaps is the greater part of it.

Mr. Moore—Why is the queen better fed in a strong colony? Do you mean that a little nucleus of three or four thousand bees won't feed one queen?

Dr. Miller—That is not so very little, you know. It does seem that if there are three or four thousand bees, there ought to be enough—the fact is, they don't feed the royal larva as profusely as a strong colony does.

HONEY-DEW IN COOK COUNTY.

QUES.—How many Cook County bee-keepers got honey-dew this season? [4.]

QUES.—How many Cook County bee-keepers here got no honey-dew this season? [10.]

QUES.—How many Cook County bee-keepers got no honey at all. [1.]

Mr. Crego—I had quite a good many sections this year very well filled, in which the honey was a kind of brown color: it was stored about the time that intervened between the storing of the honey-dew and the first of the sweet clover, and I have never been able to settle definitely in my mind what that was; some of it had a few cells of black honey-dew, but more of the sections were all filled by a brownish-colored honey; I would like to know if possible what it is.

Dr. Miller—It is just possible it might have been even then a mixture of honey-dew, with white honey.

Mr. Crego—It was of fairly good flavor—had none of the strong, disagreeable taste of honey-dew.

Dr. Miller—There is a great difference between the taste of honey-dew, and honey which has more or less honey-dew in it. I had some honey this year that had only a little honey-dew in it, and it was really of good flavor—I am not sure but what some would like it better than the pure white honey. Suppose you should put some meat on your plate, and there is no salt on it, and you empty the salt-cellar on your meat, you don't like it, but you do like a little salt. Sometimes you may have a certain kind of honey with a very strong flavor, and it may be honey-dew, and you don't like it, but you like the flavor when there is little of it. I had that kind and I thought it was quite good. Honey-dew varies decidedly; I have had some not fit to eat at all, but what I had this year was of rather good flavor; some of it tastes as much like brown sugar as anything; I am using it now in coffee in preference to sugar.

QUES.—What can honey-dew be used for that is quite strong?

Dr. Miller—I suppose honey-dew, even if it is quite strong, will rear good bees for one thing; and I want to say that you don't use enough honey for rearing bees. In the spring of the year, if you have some honey-dew, you can feed it to the bees; you might just as well have that amount of white honey given back to you; if you don't, there are vacant cells and combs in the hives, and before they put a bit in the supers they are going to fill up their brood-combs, and they will fill up with that white honey.

QUES.—Will they use much of it in the spring?

Dr. Miller—A fair amount. Then this will also make pretty good vinegar. I would count it as profitable as anything, if you have room for it, to have it turned into the bees.

APIS DORSATA AND OTHER BEES.

QUES.—Which is the best bee, the Italian or the Apis dorsata, for the United States?

Dr. Miller—I dare not say. The Apis dorsata is the larger bee, next to the largest; I believe they have a larger size. A good deal has been said about this bee, and a great many bee-keepers are quite anxious that the Government should introduce it into this country.

QUES.—How large is the bee?

Dr. Miller—I think it is something like the size of a small-size bumble-bee. I have heard that it is half as large again as our regular Italian; my impression is that that is not far out of the way. A peculiarity is that the drones and workers are reared in the same size cells, the drones being as small as the workers. Apis dorsata are very large bees, and the thought is if we can get them into this country they will work on red clover; red clover yields lots of honey, but our bees don't get much of it. Get the Apis dorsata here with its long tongue, and it is thought it will work on the red clover. The trouble is Apis dorsata has never been domesticated in its own country. Only a few days ago I saw a letter from a man in the Philippine Islands, and he said where he was they only staid six months in the northern part, and then migrated and staid six months in the southern part. They build a single large comb on a tree. Another man said he had seven large colonies, and the bees left one after another until the queen was left almost alone, and then deserted. A man who wrote about them down in Louisana, says it is too cold for them there. I am anxious that they should be brought here, but if they should get in this country and be acclimated, I don't see that there would be any gain if they cannot be domesticated; they would simply use some of the nectar that our bees get, and we would be so much worse off.

PROSPECTS IN ILLINOIS FOR 1899.

QUES.—What are the prospects in Illinois for the next summer?

Dr. Miller—In bee-keeping the prospects for next season are always good. I never knew a time yet when bee-keepers, no matter how dire the failure was, did not look forward with the hope that they would have a good season next year. I will say this, that in my locality I never saw white clover more plentiful than it is now, and last year white clover was very plenty. There is this difference between this year and last year: in the fall the clover was burned down to the ground. You would have to get down almost on your hands and knees to find where it was. The roots were there. This year it is green and bright all over the ground, so that if there is any difference there is better prospect this time than last year.

SIZE OF ENTRANCE FOR STRONG COLONY.

QUES.—Are there any objections to allowing strong colonies with plenty of stores a full one-inch opening at the entrance?

Dr. Miller—A strong colony in the honey season will bear more than an inch entrance. I would like if I could have a two-inch entrance to my hives in the honey-season, only that you cannot have too much space under the bottom-bars or they will build down; there is no objection to a strong colony having a one-inch entrance.

LONGEVITY AND PROLIFICNESS.

A Member—The general discussions in the Bee Journal seem to have a tendency to speak of the length of the tongue as being the gauge of capacity, and that with a long tongue bees can get honey from red clover. Would it not be a better idea for the queen-breeders to run on the strength of the bees' wings rather than on the length of the tongue—to rear a bee with stronger wing, so that they won't wear out so easily? If the bee lives twice as long you can cut down your force one-half.

Dr. Miller—Your idea is longevity of the bee; that has been advocated, and with good reason. For instance, here is one colony that will always be full of bees, and will have a big lot of brood; here is another that never has a very large amount of brood, but a good force of workers. The first uses a large portion of its honey in rearing young bees. If you can have longer-lived bees there is a very decided advantage.

QUES.—Is there such a thing as getting too prolific queens?

Dr. Miller—What is the harm?

A Member—I think they would have a natural tendency to swarm late; they will use so much honey for brood.

OPENING IN THE UPPER PART OF THE HIVE.

QUES.—Is there any objection to making an opening in the upper part of the hive to allow the air to circulate thru?

Dr. Miller—Comb or extracted? [ANS.—Both.] I should decidedly object to it for comb honey, but not for extracted. If you make any kind of an opening in the upper part where you are producing comb honey, near that opening the bees will not finish up their combs promptly. For a number of years I followed the lead of Adam Grimm, who was a very successful bee-keeper in Wisconsin. I was at his place one time—it was before the day of sections. He was putting on boxes, and wedged up the cover of his hive, leaving it open perhaps half an inch or more; he said, "I consider that very important." I think he was right; it helpt them to get air, and I think it helps to keep down swarming somewhat; and so, for a number of years after that, I used wide frames after I began to use sections, and the upper story I slid forward, so as to leave one-half inch opening at the back of the hive between the first and second story, that allowed fine ventilation to go thru; but the row of sections next to the opening, if they were sealed up at all, it was a long time after the others were.

[Concluded next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Climate and Foul Brood—A Difference in Colonies.

On page 181, the question is askt, "Are bees in any particular climate affected by foul brood more than in another?" The answer given is all true enough, but can hardly be called a fair answer to the question. I think bees are more affected in cold than in hot climates. I think in some parts of northern Africa the disease is at present unknown. Whether it is due to the hot climate, the variety of bees found there, or simply to the fact that the disease has not yet been introduced, I don't know.

In reply to the question of J. C. Armstrong, page 188, it may be said that the two colonies mentioned obtained their honey from different sources. One year while all the other colonies were gathering very dark honey, two or three of them stored some beautiful white honey. When the bees of a colony get started on nectar in a given place, they're likely to continue at work in that place so long as the yield is fair. C. C. MILLER.

Changing to Standard Frames.

I have in excellent condition 8 colonies of very nice bees in 12-frame hives. The frames are just the right size to admit six 4¼x4¼ sections in the lower story or three of the same in a super. It seems that bee-men in general prefer a 10-frame hive with frames just 4¼ inches longer than mine, or 17⅝, outside measure, and the same depth of mine, or large enough for the surplus or super frames to accommodate four 4¼x4¼ sections instead of three, as in mine.

1. Are my hives and frames of a standard size? Are they just as good as the 10-frame hives with longer but same depth frame? I think I see three very good reasons why I should adopt 10-frame hives with 17⅝ frame. In the first place, the bees can more readily reach any frame in the hive from the entrance. Second, in examining say 10 colonies of bees I would save handling 20 extra frames. Third, I would get just as much honey from the super frames of the 10 colonies (if all were full) with 10 frames per hive as I would from my 12-frames with four pounds per super or 40 pounds for the 10 colonies extra.

2. Do you think it best, and would you advise, on beginning (while I've only a few, 8 hives) to adopt the 10-frame, with 17⅝ frame? Are my three reasons valid enough to pay me to make the change in frames, as my old hives are just the size for a 10-frame hive with 17⅝-inch frame by turning the side to the front and cutting out a rabbet on the (now) side of the same, the frame being all I will have to change? I propose to increase solely by division.

3. If I make this change in frames, can I (successfully) increase that way (by division)? If so, how would you go about it? Would you put in a division-board crosswise at the back of my short frames? I could put in a long frame by sawing off a part of a division-board and put a narrow piece (which would be 4¼ wide) from the end of the board sawed off to the back of the hive. Please advise the way you think best for increasing in this exchanging short for long frame case of mine. ARKANSAS.

ANSWERS.—1. No, you are not using standard goods. Your first objection to your present arrangement is correct, providing your frames run crosswise, instead of having each frame running toward the entrance. Your other objections are correct, and probably sufficient to make a change seem desirable. An additional reason, and one that is of itself enough to decide the change, is the simple fact that what you now have is *not* standard. If at any time you want to buy hives, a standard size will cost less than an odd size. If you should want to sell, the purchaser, if well informed, would be willing to pay more for a standard article. I have been changing my hives and frames for no other reason than that they were not standard size, the difference in size between them and the standard being so little as to make no practical difference in results.

2. You say you intend to increase solely by division. Do you mean that you don't intend to allow your bees to swarm? Not once? You wait and see.

3. I don't believe you'll like the mixt plan you propose. Very likely you will be better suited to put the new hive on the stand of the old, shake off nearly all the bees with the queen into the new hive, and set the old hive on a new stand. To make the bees more satisfied with their new quarters, you might for a day or two put in the new hive one of the short frames, setting it at one side and letting it rest on the bottom. Or you might cut out the comb and fasten it in one of the new frames, leaving it permanently. At the same time it will not be a bad plan for you to have a hive all ready in which to hive that swarm that you don't intend shall issue.

If you don't intend to continue any of the old frames at all, it will be a comparatively easy thing, and the best plan of all, to cut the combs out and transfer them into new frames. This could be done in fruit-bloom, or later, at the time of dividing.

Increase of Colonies Wanted.

I bought three colonies of bees last summer which are now in fine condition. I desire to increase them to as many as I can, and have them strong enough to go into winter quarters safely. What will be my best plan of procedure? I can give foundation, and feed. UTAH.

ANSWER.—The safest plan is the nucleus method as laid down in your bee-book. That allows to continue increasing gradually as long as the season lasts without the danger of being caught with a large number of weak colonies on hand and none of them strong enough for winter.

Dividing Colonies for Increase.

1. When is the colony in the best condition to divide?

2. How do you divide? (I want to divide but once.) How many frames would you place with the queen part, and where would you place the hive?

3. Will I need to cut out the extra queen-cells from the half that have no queen, and when? Could I use the queen-cells to make up others, and how? Would it pay to buy queens for this half?

4. What condition will the divided colonies need to be in, before I put on the supers for honey?

5. Last year I put on a queen-excluder and kept the queen below. Was that right? Is there any danger of these excluders being too small to let bees through? One bee-man told me his were.

6. In giving a colony frames of honey or foundation, is it best to mix it up in the brood-nest, or put them at one side?

7. What do you think of this way for increase? To confine the queen with a little brood in the bottom of the hive, and let the bees rear a queen-cell in the upper hive, and when capt move it to a new stand of its own. MINNESOTA.

ANSWERS.—1. If you can tell when it is in condition to swarm, it will be ready to divide. This will be when it is strong in bees, and honey is beginning to come in plentifully. If you will look in the hive you will find a number of queen-cells started. If white clover is one of your chief honey-plants, a colony will be ready to divide about a week after you see the first clover blossoms, *providing it is strong*. You will be tolerably safe to go by the time you hear of the first swarm anywhere in the neighborhood.

2. There are different ways, and what is best under one set of circumstances may not be best under another. Before thinking of dividing, the most profitable thing you can do is to get a good bee-book and study it thoroly. Then you'll have some basis to work upon and will be ready for emergencies. With no special knowledge, and taking as little work as possible, you may find it your best plan to put in a new hive about one frame less than half the number of frames, taking among them the frame the queen is on, and taking with each frame all the adhering bees, putting this on the old stand and putting the old hive in a new place perhaps ten feet or more away.

3. There will be no need to cut out queen-cells unless the queenless part is pretty strong. If cut out, it should be about nine or ten days after making the division. Yes, if you have read up in your text-book, you can use the cells to good advantage in mak-

ing other divisions, thus saving a good deal of time. One way to do is as follows:

Take from the hive two frames of brood with adhering bees and the queen, put them in an empty hive on a new stand, filling up each hive with empty combs or frames full of foundation. Eight or ten days later let the two hives swap places. Now divide the queenless hive into three or more parts, depending upon its strength, making nuclei out of it, and making sure that each nucleus has one or more queen-cells. To divide up the cells properly, it may be necessary to cut out some of them and nail them on the surface of the brood with a heavy pin or perhaps better a wire nail an inch or more long. Of course the nail must not run through the part of the cell that would interfere with the apartment of the queen. As soon as a queen is found laying in one of these nuclei, you can make it into a full colony. Go to one of the colonies you want to divide, take away from it half its combs with adhering bees, and give to the nucleus. Then brush off the bees from all but two of the remaining combs, and after these combs are brusht add them to the nucleus. Be sure you don't take away the queen. You have now left in the old hive the queen, two combs of brood, and you will fill up with empty combs or frames of foundation. There is also a fair supply of bees there, and this number of bees will be strengthened within the next two days by field-bees returning from the nucleus. This is a good way to double your number of colonies, but of course you'll not get the yield of honey you would if the bees were left without dividing or swarming. You can get along somewhat faster by buying queens. Whether that will pay depends somewhat upon how anxious you are and how plenty money is.

4. They must be strong in bees, and the lower story must have all its frames filled either with brood or honey.

5. Yes, that was all right if working for extracted honey. For comb honey it isn't usually necessary. You will hardly find any of the perforated zinc sold by reputable dealers with perforations so small as to make trouble.

6. You may as well have the frames filled with foundation together.

7. It will work very well if the bees start cells, which they may not always do.

Bees Wintering in a Garret.

I stored my eight colonies in a garret, and the mice have captured one colony already, so I have set about trapping them. The rest seem to be very uneasy, altho the room is as dark as can be, yet the bees keep coming out, and I fear many never return. What causes this uneasiness, and what is the remedy? They are in common hives. How soon will it be safe to place them outdoors? All of these mistakes were the result of not beginning intelligently. NEW YORK.

ANSWER.—Probably no one has succeeded in keeping bees in a garret. Too cold, and in mild weather they can't fly. Set them on the summer stands the first day it comes so they can fly, say 45 degrees or warmer, when the sun is shining.

Keeping Empty Combs for Swarms.

I examined the bees to-day, and found one dead colony. I am sure they had no disease, but they were few in numbers and unable to endure the cold. I am feeding the honey left, back to another colony. The combs contain a few small patches of brood which of course perisht with the older bees. Will it be safe to use those combs again next summer? I should like to hive one of my early swarms on them, if there is no danger of disease from the pollen and dead larvæ. If my method of feeding out the honey and saving the combs for a new swarm next summer is not correct, what is a better way to do? MASSACHUSETTS.

ANSWER.—You're all right. But the sooner those combs are put in charge of bees the better. Set the hive containing them under some colony till needed to use for the swarm. That will keep them free from the worms, and the bees will clean them up so they will be sweet and nice for the swarm.

Spring Requeening and Other Questions.

1. How early in the season will it be advisable in this locality to introduce a queen? That is, requeen a colony?

2. How soon after swarming does the young queen usually emerge from the cell?

3. For comb honey, is it best to hive a new swarm on full sheets of foundation, or starters?

4. Is it advisable to put in one or two frames of honey with the foundation in an 8-frame hive? I have been advised by old bee-keepers to do so.

5. Having no extractor, what is the best way to dispose of honey left by a dead colony? When the swarm has died from diarrhea, should the frames of honey and the hive be fumigated before using again? MAINE.

ANSWERS.—1. Not before fruit-bloom.

2. About a week. If, however, the weather happens to be bad at the time the prime swarm is ready to come off, it may be delayed, and in that case the queen may emerge from her cell in less time than a week after the swarm issues.

3. The majority probably favor full sheets. Some favor hiving on a limited number of frames (perhaps four or five) having only starters, and some two weeks later filling out with frames filled with foundation.

4. That depends. If honey is coming in at a lively rate it may not be desirable; if a bad spell of weather should occur, it might be of very great advantage to have some honey on hand.

5. They're worth good money to feed to other colonies. There isn't one case in fifty that a colony doesn't use up its honey so as to have some empty combs before fruit-bloom. Take out these empty combs and replace with combs of honey from the colonies that died. No need to fumigate them; if the frames are very badly daubed, scrape them off, the bees will do the rest of the cleaning.

Feeding in the Spring.

In early spring, when bees have a prospect for a flight at least five or six times per week, would you advise feeding them *liquefied* sugar if they are *very* short on stores? If so, in what proportions should the mixture be made? If not, what should be fed? KANSAS.

ANSWER.—If very short of stores, they should certainly be fed, whether they can fly or not, for nothing can be worse than utter starvation. The very best thing is to give them combs of sealed honey. If, however, they can fly five or six times a week, there ought to be no trouble in feeding sugar syrup. When they are flying almost daily it doesn't matter such a great deal as to the proportions of sugar and water, three parts water to five parts sugar making a very good syrup, and those parts may be by weight or by measure.

Brood-Chambers Full of Honey.

I started last spring with six colonies, two of them on 4-frames each and increast to 10 and got 458 pounds of comb honey, which I think is good for this part of the desert.

My bees filled the brood-chamber last fall; I weighed some of them to-day, and they weighed from 50 to 55 pounds each. They are in 8-frame hives, the hives weighing about 25 pounds, thus leaving 25 to 30 pounds of honey, and this is March 10. By April 20 there will be plenty of honey coming in, so they must have a surplus. What is the best to do with it, cut it out and put in frames of foundation, or leave it where it is and let the bees do as they please with it? KANSAS.

ANSWER.—They'll use a lot of honey before they gather any. Better let alone, unless you find the queen crowded for room to lay, then take out a frame.

Spraying Fruit-Trees—Rearing Queens.

1. Do the poisons sprayed on fruit-trees have any effect on bees, such as Paris green or London purple? In the spring of 1898 my 54 colonies came out in good shape, and were very strong until after fruit-bloom, then they kept getting weaker, and many of them died. I laid it to the poisons sprayed.

2. Will bees sometimes rear a queen from a worker-egg, or is there no difference in the eggs when first laid? UNION HILL.

ANSWERS.—1. Yes, if trees are sprayed at the time of blooming, the bees that work on them will be poisoned. But nowadays no intelligent fruit-grower sprays trees when in bloom. It can have no effect in preventing the fruit from being wormy, but it does have an injurious effect upon the fruit crop. The number of States is increasing in which it is made a criminal act to spray fruit-trees when in bloom.

2. Yes, bees can rear a queen from an egg laid in a worker-cell, such an egg being the same as one laid in a queen-cell.

One Neighbor Killing Another's Bees.

What can I do to save my bees? My neighbor got some bees last spring and gave them old comb from some dead bees all over his yard. He has his bees under a shed and mine go there and rob his on nice days. He closes his hives in the morning, and kills my bees that go there all day. Can I do anything to stop him, and how? MINN.

ANSWER.—It's just a little doubtful whether you need do anything. It is quite possible that he is killing more of his own bees than of yours. If he closes his hives so your bees cannot enter, your bees will soon give it up as a bad job, and he is killing off a good many of his bees by shutting them in the hives on nice days. Perhaps it might not be a bad plan for you to try a counter attraction for your bees by putting sugar syrup out for them to work on. If you can clearly prove that he is enticing your bees and killing them, you may have recourse in a court of justice. If the trouble becomes very serious you may be sure of assistance by calling on the Bee-Keepers' Union or the Bee-Keepers' Association, providing you are a member, but if you are not already a member it will do no good, for you can't obtain membership if in trouble in advance. You have done a very wise thing if you have secured membership in advance, for no bee-keeper can tell when he may need help, and the trifling amount of a dollar a year is as good as insurance, besides helping your own and the interests of other bee-keepers by putting down adulteration.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861. OLDEST BEE-PAPER IN AMERICA.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Sweet Clover Article, by William Stolley, which appeared on page 113 of this journal, is highly spoken of by "Stenog," who conducts "Pickings" in Gleanings. He says:

"It would be a good thing if the whole article could be printed in every agricultural paper in the country."

A correct view; and it may be well to hint that bee-keepers may do something themselves in that direction, wherever they have any influence over agricultural papers. We have some extra copies for those who wish them.

The Honey Market.—J. O. Grimsley, in the Ruralist, thinks the secret of the trouble with the honey market lies in this sentence: "There is not a general demand for honey." As a remedy he suggests a label adopted by the United States Bee-Keepers' Association. He thinks it would make it more popular to call it "Union Label Honey," as that would be very catchy with the members of the many "trades' unions." That seems hardly in accord with the view that made the name change from "Union" to "Association."

Heavy Losses of Bees in certain parts of Michigan are reported in the Grand Rapids Herald of March 20, by Geo. E. Hilton, of Newaygo Co., and the worst month is likely to come yet.

The Worker-Bee—He, She, or It?—Editor Root, of Gleanings, seems to be getting into trouble for becoming a disciple of E. E. Hasty, and calling a worker "he." First, the Hon. Eugene Secor, in a poem occupying half a page, gets in some sharp thrusts. He thinks

> "It will never do to have it get out
> That FEMALES are WORKERS and bring things about."

With fine sarcasm he closes by saying,

> "From this time on, IT ought to be HE
> Whenever we speak of the miscalled neuter.
> Let's keep the old ruts, and not bend the knee
> To modern improvements, tho it does seem cuter.
> Young folks are too smart in this land of the free,
> And get too far from the time-honored tutor.
> Let's teach this doctrine wherever we can:
> The old-time angel was ALWAYS A MAN."

Mr. F. Greiner says the functions of a worker are those of a female, for they prepare food for the young, and do all in rearing them except to lay the eggs; speaks of the inconsistencies of language, the Germans calling the queen "he" and a drone "she;" and thinks when the time comes that proper credit shall be given to queen and to worker for their parts performed, it will be "Mrs. Queen and Mrs. Worker."

Apis Dorsata in the Philippines.—Gleanings prints a letter from John C. Uglow, a soldier at Manila, who is also a bee-keeper, and he proposes to send Apis dorsata to this country. Editor Root is quite enthusiastic over the matter, and says they will leave no stone unturned to get the big bees, offering $25 for a live queen. Some may be inclined to inquire whether Mr. Root has changed his mind since asserting that he would not be a party to having the bees here unless under domestication. Perhaps he has that fully in mind, and does not intend they shall be allowed to get loose, for Mr. Brodbeck, in California, is to give the bees a cleansing flight on the way, "but on no account is he to let the queens out."

When to Spray Fruit-Blossoms.—Bulletin 142, issued by Cornell University, says:

Never spray a fruit-tree when it is in blossom. You can reach the insect and fungous enemies just as effectively, and in some cases more so, either just before or just after the trees bloom.

Marketing Honey—Practical Suggestions.—We believe Capt. J. E. Hetherington, of New York State, bears the distinction of having produced and shipt to market more tons of comb honey than any other bee-keeper living in the United States to-day. At the Buffalo convention in 1897, he had quite a good deal to say on the line of shipping to market, and in a letter we received from him recently, he refers to the matter again. Here are some of the paragraphs which we take the liberty of reproducing for the benefit of our readers:

All bee-keepers should, I think, have a common interest in influencing producers to send their honey to market (whether in large or small quantities) neat and attractive in appearance, and thereby sustain prices and make our product more pleasing and satisfatory to both dealer and consumer—two very important personages to our success. A clean, neat, attractive case is, to my mind, quite a factor to that end. Where honey is shipt a long distance by rail, cinders and dust work into the car, and after the honey has been handled about twice at its destination, the cases are more or less begrimed, and the "bloom" all gone.

For years I have made a practice of covering my honey, when in transit, with cotton-cloth, to protect it from cinders and dust, which insures a clean, neat appearance when it reaches its destination. The expense is trifling, as the cloth cover is billed with the honey and returned for future use. I brought this before the Buffalo convention as one of the little practical things for bee-keepers to do.

Also, the putting in the bottom of every case a light manilla paper, to hold the drip and prevent the cases from being besmeared by honey, is a good thing.

Value of Bees to Orchards.—The great importance of bees in securing better fertilization of fruit-blossoms will become more and more apparent as the producers of fruit learn the facts. We find the following paragraphs in one of our exchanges, which should be past on among all farm papers, as the facts given are of value both to the growers of fruits and the keepers of bees:

Some years ago a great hue and cry was raised in certain sections of the country over the assertion that bees ate holes in the fruit and caused it to decay. Experiments innumerable have been proving the folly of such a statement. In one instance bees were kept in a room where there were dishes of all sorts of fruit, including grapes, pears, peaches and plums. It was noticeable that the fruits that had the skin broken were visited by the bees, but in no case was there any evidence that they troubled the whole fruit.

The value of bees to fruit-growers can scarcely be overestimated. Some years ago a place was least to a tenant who kept a few colonies of bees. In one corner of the yard was a very large and thrifty-looking apple-tree that always bore an abundance of blossoms, but no fruit. A number of colonies of bees were placed underneath this tree, and much to the surprise of the owner of the place, the tree was loaded with extremely fine apples—something that had never occurred before within the memory of the man who had owned the place for 25 years. The next season the bees were distributed under trees that had not been in the habit of bearing freely. The most surprising results followed, the trees being full of very fine specimens of fruit. If the blossoms on an apple, plum or pear tree are covered up and the bees are kept away from them until the blossoming season is past, there will be no fruit. This has been tested again and again.

Shape or Condition of Bees.—Dr. Miller's condition these days seems to be that of idleness, if we may judge the shape his mind is in from the writing of such letters as the following:

MR. EDITOR:—Recalling that you have been somewhat insistent that when a man said anything about the shape his bees were in he must have reference to their being round or square, or something of the kind, I arise to inquire whether there has lately been a change in a number of cases as to the general contour of bees, or whether, the shape of the Editor's mind is different. I ask this because of the frequent mention lately in the "Old Reliable," even in headings, of the shape of bees. If you are in sh— condition to enlighten me, I shall be very much obliged.

Anxiously, C. C. MILLER.

Now, look here Doctor, if you want to retain your usual shapely condition, you'd better touch very lightly on such subjects as the above.

You see, the very cold weather this winter has had such an unusual effect on the bees that both their shape and condition have been seriously affected. So, naturally, the shape or condition of the Editor's mind would be different from what it was previous to receiving reports of the unfavorable shapes and conditions the bees are in this spring.

Honey and Bees in Switzerland.—In a recent issue of the National Hotel Reporter, we find these paragraphs in reference to bees and honey in Switzerland:

In no country in the world is honey used so generally as in Switzerland. Thruout the country it is an article of daily consumption. At every hotel it is served with unfailing regularity; but the enormous demand has led to adulteration, and the purest honey is rarely found in the hotels. The *ouvrier* class consume it most largely. With his bread and butter, the workman always has honey. "It is healthy," he says truly; "it builds up the body—and it is cheap."

According to the most recent returns, there are about 250,000 colonies of bees in the whole country, or one to every 12 inhabitants; and the yield of a frame-hive colony often reaches 100 pounds of honey per season. The yield from a "skep," however, is much smaller; so that, at an average of 50 pounds per colony, the honey harvest of Switzerland may be taken at 12,000,000 pounds, or some 4 pounds per head of the resident population. These figures do not, of course, represent the actual ratio of consumption, as account must be taken of the amount consumed by the multitude of tourists.

When it is remembered that the honey is gathered only from the beginning of May until the end of July (that gathered later being required for the bees' own use), it will be seen how unresisting is the energy of the little workers. Nor is this more than a fraction of the harvest which only awaits gathering on the verdant hillsides and rich valleys of the land of Tell.

REV. A. B. METTLER, a Methodist-preacher bee-keeper of Will Co., Ill., called on us while in Chicago last week. His bees seem to be wintering all right.

* * * * *

MR. I. H. PAGE, of Thayer Co., Nebr., wrote us March 27:

"I am more than pleased with the American Bee Journal. I don't know how I have been getting along without it. Long may its banner wave."

* * * * *

MR. W. A. PRYAL, near San Francisco, Calif., writing us March 23, said:

"Regular rain-storm these three days—continous, warm, and heavy; 17 inches for the season. May have flood ere it lets up."

* * * * *

THE INTERSTATE MFG. CO., of Hudson, Wis., is one of the growing bee-supply institutions of that State noted for its many apiarian manufactories. The Interstate is composed of W. H. Putnam, general manager, F. E. Williams, secretary and treasurer, and E. E. Belden, superintendent. They began the season with 30 employees. They are well-equipt for taking care of a large business. Their advertisement is found in every number of the American Bee Journal, just as should be the advertisements of all dealers who want to do business with the bee-keepers of this country. Write to the Interstate Co. for their catalog, not forgetting to say you saw their name in the old American Bee Journal.

* * * * *

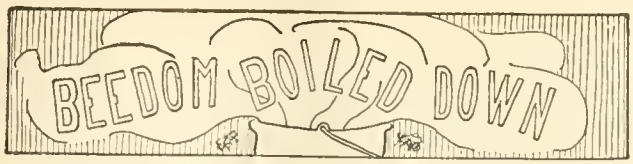
THE FARM JOURNAL, mentioned on page 222, is unlike any other paper; for one thing it prints no quack medical advertisements; for another it takes five-year subscriptions and gets the paper to its subscribers the full time if they are anywhere on this planet, even if they move two or three times; if they die their heirs get it. Now we offer to send the 50-cent Farm Journal for the balance of 1899, and all of 1900, 1901, 1902 and 1903, nearly five years, to every advance-paying subscriber, with the Bee Journal one year, all for only $1.40. Better speak quick, as we have only a limited number of Farm Journals to offer on these terms. See our other offers on page 222. It's a rare opportunity to get $3.50 worth of the best bee and farm literature for only $1.50.

* * * * *

MR. L. C. ROOT—son-in-law of the lamented Moses Quinby—is living in Connecticut, and has "Mother" Quinby in his family. In a letter dated March 21, Mr. Root says:

"While I do not lose my deep interest in apiculture, I am now managing an almost ideal milk service. With something of a knowledge of my right to make the assertion, I may be pardoned for saying that we have here one of the most correct milk services in all of its details, in the world; and you must know what that means for a manager. It commands my constant supervision from 4 a.m. to 9 p.m. To produce absolutely wholesome milk means much more than is generally understood."

Mr. Root, years ago, revised Quinby's book, "Mysteries of Bee-Keeping Explained," but it seems of late years he has been devoting himself to the milk business in the town where he lives. We like to keep track of the once prominent bee-keepers of the country, and know that tho they may be engaged in other business they have not entirely lost interest in the little busy bee.



For Protection Against Wind and Winter.—Editor Root favors a high board fence. J. E. Crane objects that the wind goes over the top of the fence and swoops down on the hives with increast force. He prefers a pickt fence to one of close boards, or else an evergreen hedge so as to slow up the wind. If the wind is stopt too much, it will warm up within the enclosure in early spring, the bees enticed out, never to return.—Gleanings.

Apis Dorsata.—Editor Hill, of the American Bee-Keeper, gives some account of Frank Benton's efforts to secure Apis dorsata, and says:

"That no subsequent effort has been made to introduce this bee is a fact not only to be regretted, but calculated to arouse the agriculturists of America to demand governmental aid in testing its qualities, which promise to be of inestimable value to American agriculture."

The Pure Food Bill.—C. Davenport urges that every bee-keeper should write to his member of Congress on a postal something like the following:

"DEAR SIR:—I and others here are much interested in the Pure Food Bill, and we hope you will do what you can to have it past."

Then address with the name followed merely by "Member of Congress, Washington, D. C."—Gleanings.

A Fresh Credit to Sweet Clover is set down in Gleanings. Elias Johnson says it is one of the best *root crops* for cattle. He plowed five acres of sweet clover land, and the cows gathered on it and workt on it for weeks eating sweet clover roots till they had the ground so hard they couldn't get another root. It spoiled the plowing, but almost doubled the milk. He also saw at a county fair towels made of the fiber of sweet clover. They lookt much like linen, and were very strong.

Black Bees Preferred for Comb Honey.—C. Davenport thinks he can get more white honey in sections with blacks than with Italians. Italians are too much inclined to crowd honey into the brood-chamber when the white flow begins; while blacks will have very little white honey in the brood-chamber at the end of the flow. Blacks cap whiter, and are more tractable when it comes to the matter of mixing and uniting colonies. For extracted honey he prefers Italians, considering the vigorous defense they make against the moth.—Bee-Keepers' Review.

An Interesting Interview with J. E. Crane is given in Gleanings, the interviewer being the Editor. Mr. Crane has about 525 colonies in five apiaries; thinks a smaller number in an apiary would give more honey per colony, but the convenience in handling compensates; produces comb honey and has generally only one helper; averages about ten hours a day of work, and 11 and 12 in the height of the season. When swarming comes, he removes queens from some, cutting out queen-cells, and giving virgin queens after two weeks or more; from others he removes brood-combs, filling up with empty combs or foundation.

Plain Sections are not strongly favored by Editor Holtermann, and he does some vigorous arguing by way of pictures. On one page in the Canadian Bee Journal is given a picture of plain sections copied from the American Bee-Keeper, and on the opposite page is given a picture of "sections with the top and bottom bar only of the section open, with solid separators and section-holders." The latter are beautifully finisht out, and are distinctly superior to the former. The advocates of plain sections will, however, be very likely to say that it is hardly fair to take as a representative of plain sections a picture so much inferior to others that have been given of the same class of sections.

Travel-Stain.—A second article by J. E. Crane upon this subject appears in Gleanings, in which he maintains the ground that the so-called "travel-stain" is not travel-stain at all, the feet of the bees having nothing to do with it. He says that the stained combs come in rare cases from pollen carried on the bodies of the bees; in others from propolis mingled with the cappings; but most frequently in the cappings of surplus honey from impure wax carried from the brood-chamber, the impurities being propolis, pollen and cocoons. The original coloring of brood-comb he attributes to the cocoons, in which he is probably in error, as Cheshire says the color comes from the contents of the bowels of the larvæ being plastered on the cell-walls.

Different Locations Require Different Management.—In illustration of this, Adrian Getaz cites in the Bee-Keepers' Review the practice of allowing bees to swarm, hiving on empty frames, and depending on the swarm for surplus. With him the plan would be an utter failure. The swarm would come in mid-May in poplar bloom, and by June 20, when the best flow (the sourwood) comes, nearly all the original bees of the swarm would be dead and few young ones to replace them. The plan will be successful only where two conditions prevail—1st, the flow must be not more than a few weeks; 2nd, the swarming must take place at the beginning of the honey-flow. He thinks these conditions prevail nowhere in the world except in southern Canada and northern United States east of the Rockies.

Conditions in Cuba.—In reply to questions about Cuba, W. W. Somerford says in Gleanings: No trouble from banditti, but plenty from rain, everything being soakt in the rainy season, when for 90 days it never forgets to rain for a single day, and bees may starve if not fed, especially blacks; and no malaria. Wax-moths plenty the year round, but give no great trouble except in comb honey, which should be shipt North before March. Extracted honey might become thin in the rainy season, but is generally sold in February or March. No poisonous reptiles except water-moccasins. Fleas to beat the world—can't get away from them—jiggers pretty bad, but no ticks nor bed-bugs. Grapes, figs, oranges, and vegetables grow splendidly, but he predicts that in the future the *comb* honey of Cuba will be the thing to astonish bee-keepers.

Large vs. Small Hives.—In a very interesting manner Adrian Getaz discourses in the Bee-Keepers' Review. Take two equal colonies, No. 1 being in a small brood-chamber, No. 2 in a large one. When the brood-chamber of No. 1 is full it commences storing surplus, while No. 2 continues filling its brood-chamber. If the flow is short, No. 1 gives a crop of surplus honey and No. 2 gives none. But Mr. Getaz, like Mr. Dadant, thinks the fair thing is to consider the second year. Instead of being equal in the spring, No. 2 is stronger, and builds up more rapidly in proportion to its numbers, has its brood-nest full as soon, and begins in super as soon or sooner than No. 1, and harvests as much or more in proportion to its size. There is a saving of time in manipulating; perhaps less feeding to do, and less swarming. If there is a light flow after the main flow, No. 2 may store surplus when No. 1 does nothing. In winter No. 2 consumes proportionally less stores and loses proportionally fewer bees.

Two-Story 8-Frame Langstroth vs. 10-Frame Quinby.—C. P. Dadant having said that it is better to have one story of Quinby frames than to use two stories of 8-frame Langstroth, Dr. Miller says in Gleanings he is afraid Mr. Dadant is right, but is anxious to believe him wrong because it is much more convenient to have the lighter hives. So, "by way of whistling to keep his courage up," he argues in favor of the smaller hives with smaller frames in two stories. The room can be limited in two as well as in one story, by using dummies. When a second story is given, the bees increase the brood-nest just as gradually as when frames are added one by one in the large hive, except that they hesitate to cross the space from the upper to the lower story. There is economy of heat in adding the second story, for the heat descends in the lower story only as the bees descend. While the large hives and frames may be better, they are not enough better to overbalance the disadvantage of their cumbrousness.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

Root's Column

No-Gob Foundation.

We Have it at Last.

It has been proven that wax in the base of ordinary foundation is not utilized by the bees, but is left there practically as it leaves the mill; and the result is, when drawn out into comb, the so-called gob, or fishbone, in comb honey.

Our New Thin-Base FOUNDATION

is exactly what its name indicates—foundation with a base as thin as natural comb, with heavy deep walls.

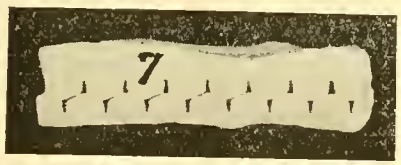


Fig. 7, herewith shown in cross-section from an actual photo, represents the new thin-base heavy-walled foundation running about 10 feet to the pound.

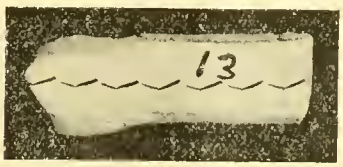


Fig. 13 represents the ordinary thin foundation with heavy base and scarcely any wall, about 10 feet: the heavy base, without modification, going right into the comb honey with very little change, and forming fishbone.

We have so far only small dies, and cannot afford to sell this product for less than $1.00 a pound. Next year, perhaps, we shall have larger dies, and will make a corresponding reduction in price.

Seven or eight pieces, large enough to fill 4¼ sections, 15 cents, postpaid; 24 pieces, prepaid, 40 cents.

The A. I. Root Company
MEDINA, OHIO.

General Items

A Little Experience With Bees.

I have kept bees for a long time in a small way with varying success, and without any particular system. For the last three years I have given them more attention, and have consequently been anxious to inform myself in the science of bee-culture. Realizing that a good paper devoted to the subject would be indispensable, I have selected the American Bee Journal as the most desirable.

I now have about 50 colonies, which I am wintering in a cellar. My hives are of my own plan and make, as are my surplus cases. I have seen none I like better, and none quite so handy and convenient. My hives are 14 inches wide, 17 long, and 11 deep in the clear, with 9 frames; loose bottom attacht with hooks, ⅝ opening with one-inch hole in the center of the front (for ventilation in winter). I use half board and half screen tackt over the front, raise the cover *slightly*, after removing the honey-board, and they are ready for winter quarters. The object of the inch hole is to provide ventilation in case the bees should become uneasy and fill the entrance with dead bees, as some times occurs. I have lost but one colony in three winters, so I am satisfied with my method of wintering.

As to foul brood, I am not informed, as I have never seen any, to my knowledge. I would like to know how to determine from *external* evidence the presence of foul brood.

The last season was a poor one for bees in this locality; mine averaged only about 30 pounds of comb honey, spring count. Very few of the old colonies produced any surplus. My bees weighed from 50 to 80 pounds, gross, when I put them into the cellar.

I am very fond of hunting wild bees, and have quite a reputation as an expert. I have found a large number of wild swarms (several hundred). H. B. KNOWLES.
Winona Co., Minn., Feb. 24.

Heavy Rains Near San Francisco.

We have now had four days steady and continuous rain. The earth is now so full of water that it cannot take up any more and it is running off where it can; in other places it lies in pools on the surface. We have not had so much rain at one time for years. Grass is growing wonderfully fast. It does not look as if less than a fortnight ago we were despairing of rain and crying "dry season." Prayers for seasonable rain were commenced in the Catholic churches when the season began to give indications of a dry season, and soon all the other churches joined in the prayer. It has evidently been answered. Four days without sun is something unusual here. This evening the rain is slacking off and giving place to a high fog. It may be that it is going to clear up. Well, it can do so now, as we have had all the rain we need. I should judge that we must have close to 20 inches. We had only 11 last year. W. A. PRYAL.
Alameda Co., Calif., March 24.

Makes His Own Hives.

This is the third year I have had bees, and I think I can say that so far it has been the hardest of the three. My bees had a flight yesterday (Feb. 18) for the first time since Dec. 1st. It was a very necessary thing for them to get out, as their stores were mostly buckwheat honey, and I saw that the hives were damp and the combs moldy. I think my hives are too tight. I have decided that bees don't want to be closed up too tight. My hives are double-walled chaff, the outside wall continuing single above the top of the brood-frames high enough to take in two supers,

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

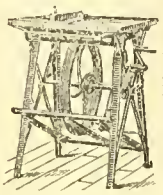
	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.00	2.25	4.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

Sent Free Our large Illustrated catalog of Bees, Hives, Smokers, &c Address,
Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.

BARNES' FOOT POWER MACHINERY



Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.
Address, W. F. & JOHN BARNES,
5Ctf 1 Ruby St., Rockford, Ill.
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The American Poultry Journal
325 Dearborn Street, CHICAGO, ILL.

A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the
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50 cents a Year. Mention the Bee Journal.

The Rural Californian
Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.
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EGGS FROM BARRED PLYMOUTH ROCKS — Thorobred — Fine Plumaged Fowls — Farm Raised — $1.25 for 15.
MRS. L C. AXTELL,
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Queens for Business ******
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

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AGRICULTURAL EPITOMIST.

Sample copy Free to any address upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

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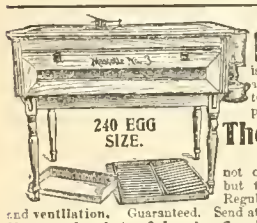
Modern Farmer and Busy Bee,

the best general FARM and BEE paper in existence. Write for sample copy to-day, and for clubbing rates with any paper you want.

Address, EMERSON T. ABBOTT,
ST. JOSEPH, MISSOURI.



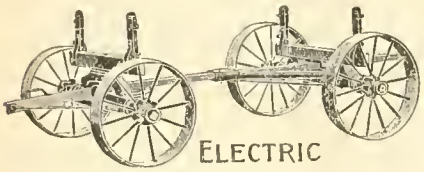
A WASTE OF MONEY is never desirable or justifiable. It is worse than waste to put high priced eggs in a poor, imperfect Incubator.

The MASCOTTE INCUBATOR not only prevents such waste, but turns failure into success. Regulates perfectly as to heat, and ventilation. Guaranteed. Send at once for FREE catalogue.

Mascotte Incubator & Lumber Co., Box 11, Bedford, Ohio.

BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel,



which is neater, stronger, and in every way better than wood. Well painted in red and varnisht. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co. Box 16, Quincy, Illinois, for their new catalog, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

CHICKEN MONEY and how to get it; how to mate, breed, feed and market poultry. Cuts and plans for building poultry houses and cost of same. These and many other things together with

CYPHERS INCUBATOR which is sent freight paid to every purchaser is contained in our Poultry Guide. Sent for 10 cts.

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40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free.
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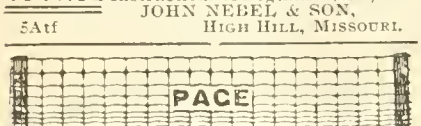
5Atf HIGH HILL, MISSOURI.



SURE THING!

If there's nothing in coiled springs, why not make mattresses of straight wire? But there is, you know, and the coil is ours.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing

one being on and filled with chaff, and a cover over all. I think from appearance it is too close.

I want to say to the readers, and to those that should be readers of the American Bee Journal, that this is the third year I have taken this journal, and it bids fair to be the best of the three. I have been very much interested in Mr. Golden's method of producing comb honey, and his very unselfish way in giving it free and unrestrained to all alike, and I for one would thank him. My interest was first awakened by the article appearing in the first number of the year, then I took the previous volumes, as I have them bound and indext, and read everything pertaining to the Golden method, and I have decided there is something in it.

I am young in the business, but I am in it because I love it, and am very fond of honey. I can't give it my undivided attention, but sometime I hope I may make it more of a business.

I have noticed some discussions as to the advisability of bee-keepers making their own hives. I want to say I for one believe in it, but not for all. I confess I am very particular to have a good job when it is done, and some of the bee-supply firms can do the best kind of work, and cheaper than most of us can possibly do it. But with others like myself, it is different. I have a nice little barn on my place which I use for a shop. I have a two-horse power engine and a combination circular saw, all of which I made, and by taking pains I can do pretty good work. So I say, if one is so fixt he has the advantage over others in the business. NORMAN O. JARVIS.

Madison Co., N. Y.

Hard Weather on the Bees.

We are having dark, damp weather at present. I am afraid for the bees. I have lost one of my colonies with the diarrhea already—a good one, 2½ gallons of bees in it, and about 30 pounds of honey, nice and sealed white clover mostly. Our damp weather has continued since the middle of February, and I begin to feel shaky about the bees. WILLIAM LYONS.

Sioux Co., Iowa, March 14.

An Old Bee-Keeper.

I am an old bee-keeper, and have reared a good many queens and sold them for $5 00, and bought one queen for $15 00. I bought my first colony of Italian bees for $20 00 when they first came, but now they are low. I have transferred bees for many years. I went 40 miles to transfer, but now the seasons are poor and winters hard. I once had 50 colonies, and have now 10. Last year was very poor. Two years ago I got 55 gallons of honey from five colonies.

C. J. YODER.

Wayne Co., Ohio, March 23.

Heavy Loss—Good Crop Prospect.

The winter loss in this part of the country is greater than ever known before. Some bee-keepers' loss is 25 percent, and some 50. I was very successful, for I wintered my whole apiary without the loss of a single colony. I never before had bees in as fine shape as this spring—plenty of bees and brood.

The prospect for a large honey crop was never better than it is this spring. Maple and elm are in bloom, and the weather is clear and warm. The bees are tumbling over each other bringing in pollen. Hurrah for the American Bee Journal!

Page Co., Va., March 24. C. H. MAY.

Worst Winter—Bitter Honey.

I appreciate the American Bee Journal very much, and have tried to get my friends to take it. This has been the worst winter I have seen here, the temperature went to 18 degrees below zero. I have at present 14 colonies, which have all come thru safely so far, tho I expect to have to

We don't keep Supplies

WE SELL THEM

In order to do this we have to have GILT-EDGE STOCK, and make prices right.

Send us a list of what you want for the coming season, and let us make you SPECIAL PRICE.

Standard Lumber Co.

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A Great Mistake

it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page catalogue. It costs 6c. but is worth a dollar to you for the poultry information it contains, to say nothing of the pointers it gives you Send for it at once.

DES MOINES INCUBATOR CO., Box 78, Des Moines, Ia.

ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.

9A26t J. D. GIVENS, LISBON, TEX.

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INCUBATOR SUCCESS depends upon the following named essentials—proper distribution of heat and moisture and perfect regulation and ventilation. These points attain perfection in the

PETALUMA INCUBATOR

Add to these points superior construction and finish and you have a perfect machine. They deal only in high percentages of hatch. Sizes from 50 to 350 eggs. Prices $10. up. WE PAY FREIGHT ANYWHERE in the U. S. Catalogue free.

Petaluma Incubator Co., Box 91, Petaluma, Cal.

We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating

EXCELSIOR INCUBATOR

Thousands in successful operation. Lowest priced 1st-class hatcher made

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EGGS FOR SITTING Pure-bred Barred Plymouth Rock, 15 Eggs for $1.00.

Superior Rose Comb Black Bantum Eggs, 15 for $2.00. No other varieties kept.

Italian-bee keepers being men of good taste and sound judgment should beep the best and most profitable kinds of Poultry. Only fresh eggs used, carefully packt and sent by express. Safe delivery guaranteed. D. S. HEFFRON,
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Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

feed, as fruit-bloom is all killed, and the spring is so backward. This is not much of a honey locality, as for the last few years the greater part of the honey has been so extremely bitter, especially late honey. There is a weed known locally as "yellow-weed," which yields plentifully, a beautiful, light honey, but as bitter as quinine. The same weed also ruins milk. I will send a sample this year. ALBERT E. ISAAC.
Morgan Co., Ala., March 23.

A Correction—Lots of Rain.

On page 94 I am made to say: "The coldest it has been in the last six years here was 16 degrees below zero." I wish you would please change it to 10 degrees *above* zero.

I like the Bee Journal. We are having lots of rain. HERBERT PRUNER.
Douglas Co., Oreg., March 23.

Good Weather for Polar Bears.

There seems but little prospect of getting bees out of winter quarters for some time yet. To-day the snow is two feet deep all over the bee-yard, and it is still snowing, accompanied by a strong gale from the north. If such arctic conditions continue much longer, the production of polar bears will be a more profitable industry in Minnesota than the production of honey.
WM RUSSELL.
Hennepin Co., Minn., March 25.

Endured a Hard Winter.

I have one colony of bees which I purchast last fall and packt with chaff on the summer stand, as nearly as the American Bee Journal instructed me as I knew how. They have endured a long, hard winter, but have taken occasional flights whenever the climatic conditions would permit, and I believe they are in good condition.
CHAS E. HOOVER.
Whitman Co., Wash., March 13.

1898 Not a Total Failure.

The year 1898 was not quite a total failure. I began the spring with only 12 colonies, increase none, and I took off about 1,500 pounds of honey in the comb, while my neighbors, who cannot afford to take the Bee Journal, received little or no honey from their bees. GEORGE A. KERR.
Kent Co., Mich., March 25.

Bees in First-Class Condition.

My bees are in first class condition, and had a good flight March 21, so they can stand being coopt up for a while yet. Some have lost some bees around here.
W. H. POTTORF.
Mason Co., Ill., March 23.

Bees in the Cellar, All Right.

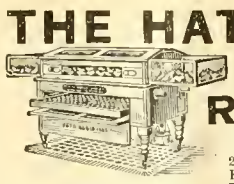
The thermometer has ranged here from 12 to 24 degrees below zero, without any snow on the ground. The bees have come out pretty slim, where they were outside, some losing their last colony. I have lost 3 out of 6 that were in a small bee-house outside. Those I put into the cellar are all right. The cellar is the place for me to winter bees. M. V. JEWELL.
Genesee Co., Mich., March 17.

Preserving Fruits with Honey.

In looking over the pages of the American Bee Journal, I came across a request for those who have tried preserving fruits in honey to give their experience. My experience is limited, and is confined to a few trials with grapes.

Trial No. 1.—Seven pounds of sound grapes on the stem packt in a stone jar. Make a syrup of 4 pounds of honey, 1 pint of good vinegar, with cloves and cinnamon to suit—say 3 ounces each; boil together

THE HATCHING HEN



HAS LOST HER OCCUPATION
and in the production and brooding of chicks she has been supplanted by the better and everyway
RELIABLE INCUBATORS and BROODERS.

They Hatch and Brood when you are ready. They don't get lousy. They grow the strongest chicks and the most of them. It takes a 228-page book to tell about these machines and our Mammoth Reliable Poultry Farms. Plans for poultry houses, best way to handle, feed and market fowls, etc.
Sent on receipt of 10 cents. **RELIABLE INCB. AND BROODER CO. Box B 2, Quincy, Ill.**
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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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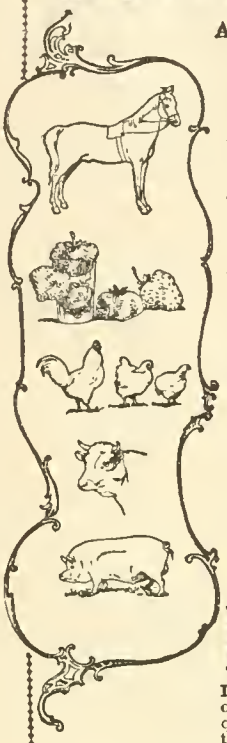

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All about Horses—a Common-Sense Treatise, with over 74 illustrations; a standard work. Price, 50 Cents.

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FARM JOURNAL

Is your paper, made for you and not a misfit. It is 22 years old, it is the great boiled-down hit-the-nail-on-the-head,—quit-after-you-have-said-it, Farm and Household paper in the world—the biggest paper of its size in the United States of America—having over a million and a-half regular readers.

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Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
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for 20 minutes, skim well, then turn hot over the grapes and seal.

This recipe I found in "Honey as Food and Medicine" [A pamphlet now out of print.—ED.], and it was added that apples, peaches and plums may be preserved in the same way. The grapes thus treated were good enough for anybody, and kept for a long time.

Trial No. 2.—I put a lot of real nice bunches of sound grapes into a lot of real nice honey, and the result was that I spoiled both. My recollection is that I had something that resembled vinegar more than anything else. EDWIN BEVINS.

Decatur Co., Iowa.

Bees Wintered in Good Shape.

My bees have come thru the winter in fine shape. I am feeding bran now, and you ought to see them carry in the bee-bread. The weather is lovely, and we look for an early spring.

F. D. HAHNENKRATT.

Otero Co., Colo., March 19.

Having a Good Rain.

We are just now having a good rain—the first since Jan. 12. It will have to rain a great deal more than it usually does to make honey in the late buckwheat localities. F. J. FARR.

Los Angeles Co., Calif., March 17.

A Big Little Honey-Eater.

Seeing the question in the American Bee Journal, as to how much honey one can eat at one meal, I thought I would tell how much I could eat. I have often eaten one pound of honey at a meal, and I am only 13 years old. I wasn't trying to see how much I could eat, but I ate it because I wanted it. JOSIE M. TICHENOR.

Crawford Co., Wis.

Good Prospects for Honey.

We have had a very cold winter here. Bees have come thru in poor condition. There is no brood in the hives to amount to anything now. Very late spring, and no flowers yet. Bees will be late in brood-rearing, the latest I ever saw. Prospects are good for a honey crop thus far.

G. D. HAWK.

Sullivan Co., Tenn., March 21.

Fruit-Trees in Bloom.

Fruit-trees are now in full bloom. The bees are busy, and I think that prospects are favorable for a good season.

J. G. STEWART.

Donna Ana Co., N. Mex., March 20.

Wintering in Good Condition.

My bees, and those of Mr. L. C. Watts, seem to be wintering in good condition thus far, in cave and cellar. G. H. SCHRAM.

Jasper Co., Iowa, March 25.

Not An Encouraging Report.

My bees are in fair condition now. They have been carrying some pollen from the elms when the weather is suitable. I have lost one colony so far this winter. My honey crops in the last three years have been just medium. In 1896 I secured 214 pounds of comb honey and 240 pounds of extracted honey; in 1897, 126 pounds of comb honey and 51½ pounds of extracted, from 50 colonies; in 1898 I secured 315 pounds of comb honey and 273 of extracted, from 55 colonies. This isn't much of a country for honey, that is, for quantity, but the quality is all right. Our honey is generally fair, and fine-flavored, but not enough of it to pay for the trouble of taking care of the bees, which in this part of the country, except in the mountainous parts, don't get very much surplus honey.

DITTMER'S
Comb Foundation

Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small cousumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

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For Sale!
in Cincinnati, O., the Honey and Bee-Keepers' Supply Business
establisht and formerly owned by the late
CHAS. F. MUTH & SON.

Will sell cheap. Call on or address MRS. ANNIE MUTH, 2146 Central Ave., Cincinnati, O. 13A2t
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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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Sole Manufacturer,
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And that's the secret of our immense trade that has made us

HEADQUARTERS IN THE WEST

For Bee-Keepers' Supplies. We are ready now for the season of 1899 with an immense stock of the latest and best in our line. Send for our 1899 catalog and discounts for early orders.

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10A8t DES MOINES, IOWA.
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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

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SILVER GRAY CARNIOLAN —QUEENS—
—ALSO THE—
Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

C. B. BANKSTON, - Rockdale, Texas.
13Atf Please mention the Bee Journal.

I am not located in reach of the mountain country. The reason the mountains are better is the poplar timber isn't cut out for lumber.

I have had two out-apiaries for three years; they didn't pay anything, not enough to pay for the hives that the bees were put into. I sold one of the out-apiaries of 13 colonies last fall, and I am going to sell the other as soon as I can find a buyer. I have 35 colonies here at home, which are as many as I can attend to for a short profit. A. C. BABB.
Greene Co., Tenn., March 20.

A Beginner's Experience.

I got two swarms last summer; one did fairly well, and the other *one* had bad luck all along, and finally died. I found one last fall in the cornfield (Sept. 17), an average-sized swarm of very light hybrids. I brought them home and put them into an 8-frame hive, and fed them sugar syrup; they built 7 frames about ⅞ full of comb, but did not get it full of stores. They did very well until we had a young blizzard, and that ended them with some stores left. I think the cluster got too small to keep warm, as they died off quite fast.

I think this ought to be a very good section for bees, as we have early pasture, willow, soft maple, plenty of fruit, white clover in all the pasture land, and lots of buckwheat and wild aster in the fall.

P. A. BARCLAY.
Ulster Co., N. Y., March 12.

Convention Notices.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Beuna Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Connecticut.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, May 3, 1899.
Waterbury, Conn. MRS. W. E. RILEY, Sec.

It Costs No More
TO FEED, RAISE AND HOUSE GOOD
Pure-Bred Poultry
than it does common stock, and it pays tenfold better. Send stamp at once for Illustrated Catalog and Poultry-Book.

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Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for
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Fifty (50) colonies of ITALIAN BEES in standard Langstroth hives in good condition. Will sell five (5) colonies, or the lot, at $3.00 per colony. Also one Given Foundation Press, and one Cowan Honey-Extractor. For further particulars inquire of

14A4t MRS. J. W. LeROY, Rio, Wis.
Please mention Bee Journal when writing.

HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, March 21.—Fancy white, 13c; No. 1, 11@12c; ambers, 9@10c; dark, 7@8c. Extracted, white clover, 8c; other kinds, 7c; amber and dark, 5@6c. Beeswax, 27@28c.

There is no change of consequence since our last quotations. Stocks of the best grades of white comb are being reduced, and receipts are light, with some accumulation of the off grades, there being additions to those grades from time to time. R. A. BURNETT & Co.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c.
M. H. HUNT.

KANSAS CITY, March 10.—Fancy white comb, 13c; No. 1, 12c; amber, 11c; dark, 10c. Extracted white, 6c; amber, 5c; dark, 4½c. Beeswax, 25c.
C. C. CLEMONS & Co.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.
HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 15.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6¾@7c. Beeswax, 24@26c.

Present slim stocks admit of only a light jobbing business being transacted, with values much the same as previously noted. The coming crop is likely to be small. The bees are now being fed in a large portion of Southern California, and many are reported to have already died.

BOSTON, April 1.—Fancy white, 13c; A No. 1, 12@12½c; No. 1, 11@12c; No. 2, 9@10c: demand fair; no call for dark. Extracted, supply very light, good demand. White in 60-pound cans, 7½c; light amber in barrels, 7c. Beeswax, very light stock, good demand, 24c.
BLAKE, SCOTT & LEE.

BUFFALO, April 1.—Little or no strictly fancy one-pound comb honey here. It would sell well at about 11@12c. Few lots of common, dark, etc., arriving, and sell at 7@8c mostly; some very poor at 6c. There is no extracted here; worth from 4½@5½c; extra fancy, 6c. Fancy pure beeswax, 30@32c; poor, 25@28c.
BATTERSON & Co.

OMAHA, April 1.—Fancy white quotable at 13@13½c; choice, 12@12½c. Extracted, 6½c.

Quotations are practically nominal, as there is no stock left now in receivers hands, and dealers have also but very little left. There will not be a pound of any kind of honey carried over in this market. PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.
A. V. BISHOP & Co.

Bee-Supplies.
Root's Goods at Root's Prices.
POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

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The W. T. Falconer Mfg. Co.

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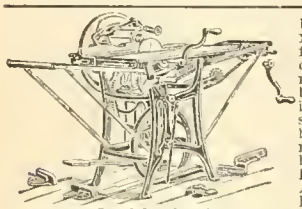

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

I ARISE

To say to the readers of the BEE JOURNAL that

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has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen . $1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,

11A26t Borodino, Onondaga Co., N. Y.

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.

Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.

PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

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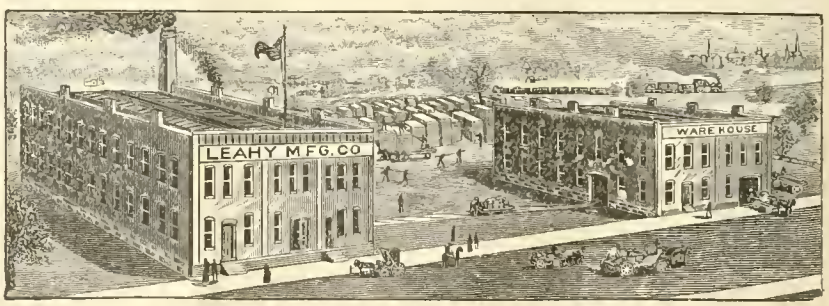

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Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

ITALIAN BEES AND QUEENS.

These Apiaries are run for HONEY and pay well, as the bees are hustlers.

Untested Queens, 60 cents; 3 for $1.50; 6 for $2.70.
Tested Queens .....$1.00 each.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., APRIL 13, 1899. No. 15.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

NOT ENTHUSED OVER EUCALYPTUS.

Mr. Pryal's talk and pictures about the eucalyptus trees (page 129) are very interesting indeed; and yet I do not find myself getting *enthused* about them much. If a tree looks like a beanpole, and if we have to say to a fellow, "This is an excellent medicine," in order to make him eat the honey, 'pears like that bee-folks might go further and do better in the matter of tree-planting.

FEEDING EVERY TENTH HIVE.

Page 132. What shall we say about Mr. Aldrich's plan of feeding every tenth hive, and making the bees store honey for the other nine? I should have doubts about their doing so much storing readily, and fears that bees so overworkt in the fall might "peter out" before spring. Still, I am conscious that these may be empty and needless apprehensions. I don't *know* much about it.

A TRICK OF THE HONEY-COMMISSION MEN.

There is an idea dropt by Mr. McNay, on page 132, that we can hardly afford to let slip. Send a commission man honey outright and he puts it in the back part of the store, to sell when he gets other things cleared up. Make him pay you a good advance on it, and (just as naturally) he sets about selling it at once, because he wants to get his money in hand again. See? Quite honest men have been known to look out for their own interests, don't you mind?

FREQUENT FLIGHT-DAYS AND GOOD STORES.

You're just like all the rest of us, Comrade Dadant; crowing loudly before we're out of the wintering woods. Frequent flight-days are indeed the best thing we can possibly have to get thru the winter on, *except one*. And that one thing is "pizen on us" this winter. Not for many years has the quality of the winter stores been so poor as this time. If spring should prove late and trying many of us will suffer, I fear. Good plan to count our mercies, however. Had this winter been as destitute of flight-days as some winters are, many localities would scarcely have had a bee left by this time.

A QUEEN'S SPRING EGG-LAYING.

Whoever has stood before a tired audience, burdened with the duty of interesting them notwithstanding their weariness, can sympathize with Mr. Doolittle as he began the brilliant address reported on pages 133, 146 and 165. We're all glad that the "scare streaks" up his legs didn't make him sit down. When a really competent lecturer talks on the rudiments of a thing he is pretty sure to let out some facts which those advanced in the art can feed on with interest. Probably not one in a hundred of us knew that the queen begins in the spring by laying about ten eggs a day for awhile. If Cogitator had been driven to a Yankee guess he would have guest about half-a-dozen eggs the first day, and a couple of hundred the second. But of course Doolittle is right. In the observation of little things he is one of the most accurate observers.

DIFFERENCE IN TASTE OF HONEY.

As to the question of the taste of Italian honey *vs.* the taste of the other kind, which Mr. Bevins sails into so valiantly (page 134), 'Tater would incline to go further, and deny the alleged facts *in toto*. Different races, strains and colonies differing in pretty much every imaginable way, now for the better, and now for the worse, the bees a fellow is enthusiastically in favor of store (of course) the best-tasting honey for him. That was a sharp shot of B.'s where he reminds his antagonist that very many flowers hang bottom side up, so the heaviest nectar would settle into reach, instead of out of it, if any such separation went on.

PROOFS OF GENUINENESS (!).

In the ninth boil-batch page 138, Holtermann hits the bull's-eye (or say the cow's) with that milk story. Leaving propolis on the sections to prove genuineness next door to proving butter by the hair in it and milk by that cow-dung flavor often gently alluded to as the "taste of the barn."

ODOR OF TAR FOR FOUL BROOD.

Won't do to trust one swallow for a summer, but if many swallows get the same results as Loyalstone, on page 138, we shall have something new of distinct value in fighting foul brood. Just powerfully impregnate wax designed for foundation with the odor of tar.

THAT "EAR-WAX FOR STINGS" STORY.

Ear-wax the best remedy for stings, eh, only so apt to be unattainable. Page 140. Let me suggest, Mr. Hermance: If all the bee-folks should warm your ear, by telling you what they think of your whisky remedy, it would melt out wax enough to give you a start in the ear-wax supply trade.

THE QUESTION OF FACING HIVES.

That boy Miller, on page 166, was being switcht not for facing hives the wrong way, but for teaching that the direction made no difference. And, lo, he thinks to get off by showing that a big bee-man (the biggest one of all, in fact) considers facing quite important. No, my boy, if you could get Doolittle and Cogitator to play the two-ram act, that wouldn't help you any. Furthermore the chances are that they won't butt. Doolittle lives in a very cool climate, high altitude, and pretty well north; and if he decides that the days when sunshine right square in front does harm are so very few that the days when direct sunshine does good greatly overbalance them, 'Tater won't deny it. And if 'Tater finds very few summer days when the sun after 11 is any good, and many days when it is a sweltering nuisance, I don't believe Doolittle will put down his wooly pow and

charge. Whole thing a matter of climate. Nobody in the North has any good word for a north facing; but presumably in Cuba (if hives had to be left awhile without shade) north facing would be the only proper way. The matter is very simple indeed. To get the morning sun and not much else, face east. To get the most sun possible, face south. To get the least possible, face north. If your honey mostly comes in afternoons, and afternoons are apt to be too cool, face west.

MR. GETAZ PROBABLY TWICE CORRECT.

Cogitator agrees with Adrian Getaz, page 145, that dead bees in the outer spaces, in out-door wintering, are dead of cold—rest of the world to the contrary notwithstanding. And quite possibly Mr. Getaz is correct in calling stimulative feeding and brood-spreading two equivalents, either one of which may be used, but not necessarily both at once. 'Tater's a little shy of both.

BRUSHING HONEY INTO COMBS.

Another way to get honey into empty combs for feeding purposes—brush it in with a paint-brush. Maybe now that's a good idea. Thanks to Mr. Bair, page 148.

MARKETING HONEY—PECK'S PECK OF TROUBLE.

Mr. Peck's peck of trouble, on page 149, is one wherewith many of us have been peckt—good local sale-route patiently workt up (8 cents a pound), and, presto, a youngster strikes in at 7 cents. The satisfactory remedy is rather hard to find. Mr. Peck thinks "edicating him" with bee-journals, etc., only makes him worse—surer than ever that *he* can get rich on 7-cent honey. Whatever we do, let's not get mad and hate the boy in our hearts; he's only at what the world calls "business." I put my retail figure at 7 cents years ago, and the 6-cent boy has not yet turned up. If he should, my honey would be 6 cents directly. I admire, rather than hope to imitate, the once-a-year visited route, and the uniform 25-pound package. Too late to make my route stand that now, sure. Smaller packages and more frequent visits are more to the mind of the average customer; and once-formed habits do not change easily to habits a little less agreeable.

30,000 TONS OF COMB HONEY.

Honey statistics (in this country at least) are apt to be disgustingly unreliable, and far off from the truth; but when the big makers can be got to report how many sections they made we have *something* to tie to. The 30,000,000 that Wisconsin made is a big lot. If we may credit all the rest of the Union with as much more, we have an indirect hint of 60,000,000 pounds of section honey. Page 152.

DEFECT IN MICHIGAN'S FOUL BROOD BILL.

That Michigan Foul Brood Bill looks excellent in the main, but seems to have one gross fault. The minimum of punishment under it is a 50-dollar fine; and this can be inflicted on a person not to blame at all, only densely ignorant. Better split things. The 50-dollar minimum just so as it ought to be for the man who resists the inspector; but for selling foul-broody bees or honey better let the court decide just what the measure of guilt is, and not compel injustice by a minimum. COGITATOR.

The Omaha Convention Report ran through 14 numbers of the Bee Journal, beginning with the first number in October, 1898. Now we have on hand quite a number of complete sets of that report, which we will mail for just 10 cents each. That is, 14 copies of the American Bee Journal for only a dime. There are doubtless a good many of our new readers who will be glad to get that fine report.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

CONTRIBUTED ARTICLES

Poor Stores and Want of Air Cause Loss.

BY WM. M'EVOY.

MISS FANNIE C. DAMON, Middlesex Co., Mass.

Your letter of answers to my questions was received some time ago, and I will now give you my opinion of the cause of the sudden death-rate of your old bees in the winter, and the unhealthy condition of your colonies in the fall. Want of air in winter and poor stores in the fall were the causes of all your loss of bees.

The closing of the entrances of your colonies with ice and snow in February, 1898, was a very serious matter, because it left the bees to depend entirely on what air they could get thru the packing on the tops of the brood-chambers. When I read of the large death-rate of bees among your colonies—all dead in six, and only a small quantity alive in the other 11 hives—I felt certain that you had too much weight on the "safety valve"—too much close packing on the brood-chambers, when the entrances of your hives became closed air-tight with ice.

To make sure that I was not mistaken, I wrote to you asking how many inches of packing you had on each brood-chamber, and what it was composed of. When you answered saying that you first put on a covering of burlap, and on this a woolen mat, then an oats chaff cushion five inches thick, and above this from two to five inches of leaves, which made the tops of the brood-chambers almost air-tight, I knew well that it would not do to let the entrances become closed solid with ice and frozen snow, and remain in that condition for several days with so much packing on top of the hives, because the steam that would arise from the breath of the bees in that fix would dampen the packing above, soften the capping on the sealed stores, thin the honey in the unsealed cells, and injure the keeping qualities of a part of the honey, and particularly so with honey gathered from fall flowers.

Miss Damon, I see by your letter before me, that while your hives were bankt up with snow in February, 1898, it rained until it filled the snow with water, and then froze the snow solid with a crust of ice on it strong enough to bear up a horse, and after that everything seemed to be as hard as adamant. Very true, and that same very extremely cold dip froze the damp packing above the bees, and closed the entrances with ice and snow, and then the bees began dying by thousands for the want of air.

As you say, you had been for years very successful at wintering bees, and I don't wonder at it because you not only gave your bees plenty of stores to winter on, but had taken the greatest of pains to pack your colonies in first-class order. If you had only thought of it and kept the entrances to all of your hives clear, so that the bees could have had plenty of air, your colonies would have wintered just as well as the others had done in the past.

In reading over your letter of answers to my questions, I find that you prove my opinion to be correct as to the cause of your loss of bees in winter, and the dwindling in spring, when you say, "But the only colony of mine that came thru safely was in a cooler place, and not so bankt with snow, and had more ventilation at the back of the hive, as the loose bottom-board had become warpt." Ventilation was the very thing that saved that colony, and it was a pity that your other colonies did not have as much ventilation as that one.

Now about the combs with honey, which you took such pains to save so nicely and so well. Very few of our best bee-keepers would have thought of that. I was anxious to know if your bees had not gathered considerable honey from fall flowers in 1897, which I believed they did. You replied, saying, "The bees did gather a great deal of fine thick golden-rod honey in the fall of 1897." The keeping qualities of the different kinds of honey in the comb varies a great deal when exposed to dampness. Some will keep in fair condition under trying circumstances for six months, while some other kinds of honey won't keep as good for three months if exposed to the same amount of dampness. Some of the combs which you took out of the dead colonies had more or less of the honey in them, which your bees gath-

ered from fall flowers—a class of honey that doesn't keep as well as clover after the bees almost wintered on the combs that it was in.

If these combs had been mine, *I would have extracted the honey out of every one of them*, right after I took them out of the hive, and then heated the honey until a good waxy foam raised on top of it; after skimming it I would have fed the honey to the bees *in the evenings* when the bees were gathering little or no honey during the day. The bees would have fed the most of the honey direct to the larvæ just then, and by steady and regular feeding at such times the most of the old honey would have been profitably used up, a very much larger quantity of bees reared, and not one cell of dead brood would be found in any colony during the time the feeding was going on.

Miss Damon, it is my opinion if you had extracted every particle of honey out of every comb last spring, before you used any of the combs, your colonies would have been all right last fall. When your bees began dying at a rapid rate last fall, a prompt removal of every comb for combs with better stores is what should have been done, and if these could not have been had, I would have crowded the bees on a limited number of nice empty combs and then fed them plenty of granulated sugar syrup until they filled them and sealed them over nicely, and then all would have been right. Woodburn, Ont., Feb. 27, 1899.

Wax-Secretion, Etc.—A Reply to Cogitator.

BY R. C. AIKIN.

ON pages 2 and 3 appears an article from myself in which I referred to comb-building and wax-secretion and their effect on the yield of surplus. I referred to certain doctrines that have been commonly accepted in the past as correct, tho now largely disbelieved, viz.: That 15 to 25 pounds of honey are consumed, over and above that which would otherwise be, for each pound of wax made into comb.

I also said that I did not believe that so much was lost to the bee-keeper, but "that all normal colonies, when gathering nectar and ripening and storing the same, secreted more or less wax regardless of the need of it," inferring that it might be as well to let the colony build some comb. I further said that "a 10-frame hive, Langstroth size, takes nearly two pounds of wax to construct its combs. Surplus honey from the same hive to the amount of 25 pounds means about three pounds of wax secreted, which, at the ratio of 15 of honey to one of wax, means 45 pounds of honey consumed in comb construction."

I also said, "the brood-combs should contain not less than 35 pounds" (which is surely very reasonable, for I have known 10-frame hives, when *full*, to contain over *50* pounds of honey), "which, added to the 25 pounds of surplus received, would make 60 pounds." Is there any overdrawing or rash statement in that? There is a plain statement that a colony has built *all* its comb and stored *60 pounds of honey*.

Now, if it be true that the wax used in these combs would cause the consumption of 15 pounds of honey to one of wax produced, then surely the colony, if no wax was secreted or comb built, but instead had been given *all combs needed* to receive *all* they *gathered*, that stock of honey must at least equal the 60 pounds plus *all* consumed to make *wax* (comb).

I have a large solar extractor. I once cleaned this and loaded it with 100 Langstroth combs, putting in *frame and all*. After removing the wax and refuse, the solar was again loaded with 100 combs as before. These were nearly all natural combs, and yielded about 18 pounds of wax to the 100. I do not know how much wax was in the refuse, nor how much soakt into those 200 brood-frames, but surely some. This corroborated the statement of others, that about two pounds of wax would build comb in 10 Langstroth frames.

Since the publication of that article, on pages 2 and 3, I have made two more experiments. Honey from 25 sections 4¼ x4¼ x1⅞, and full separatored, was cut out and melted, and a second 25 treated likewise. I neglected to put down the figures, so I have them somewhat indefinitely in my mind, but I remember distinctly that one lot gave me 17 pounds of honey, and the other a little more—I think it was 18 or 19 pounds—and of wax one gave 14 ounces, and the other either a little more or a little less—I think a little more.

The section experiment shows clearly that very close to one pound of wax is used to hold 25 pounds of honey. This is fully in line with the two pounds to 10 Langstroth-frame combs. Counting the necessary waste in the melting of the 100-comb lots, I should say that my estimate of three pounds of wax in the brood-chamber and a 25-pound surplus of section-honey stored as indicated in that former article, was not overdrawn one bit. And more, the addition to the 60 pounds of 45 more represented in the wax (105 in all) should represent the honey gathered by that colony if the 15-to-1 theory is correct.

I further stated that *if* it was true that *bees were kept from fielding* to *secrete and manipulate this wax*, that an additional amount must be lost in that way, and I guest that at ⅓ the total honey gathered, putting it at ⅓ of the 60 pounds, whereas it should have been ⅓ of the 105 or more. According to the basis of figuring used, I said, "A *swarm* hived and building *all* its comb and yielding a 25-pound surplus, should, if given all the comb it could use, have yielded, in addition to the 25 pounds, 65 pounds more—a total of *90 pounds of surplus*."

At the bottom of page 81, and top of page 82, Cogitator makes an unfair reference to me, and misrepresents what I said. I did not say "that 25 pounds of surplus comb honey means three pounds of wax secreted," and I hereby demand that Cogitator come down on his knees and receive his just reward, and that hereafter he will not set me up in such a light as he there does.

A certain preacher wisht to condemn a certain fashion in hair-dressing, and took for his text, "Top-knot come down;" whereas the whole text was, "Let him that is on the house-top not come down," etc. To take detacht sentences, and sometimes even paragraphs, would make any of us appear as fools.

No, sir, Mr. Cogitator, I stick to it that 10 Langstroth combs and 25 pounds of section honey represent just about three pounds of wax. You admit that "the current ratios should be hauled dawn a long way," so we will haul it down to 8⅓ instead of 15, and still the case I supposed would give *50* pounds instead of 25, which ratio your humble servant would haul down at least by another 4⅙.

Now suppose the colony to be an old establisht one, having all its brood-chambers full of combs, only that in sections to build. Take your own figures of one pound of wax to 20 of honey, and let us figure some more. If a pound of wax costs five pounds of honey, then the ratio as between that stored when comb is built, and when no wax-secretion is necessary, is 20 to 25. At 10 it is 20 to 30; at 15, 20 to 35; at 20, 20 to 40. I will take the 5 to 1 as the nearer correct of any of them, and if you or any other cogitator can prove me wrong, just pitch in.

Beware that you do not fall into the error of accusing me of saying that there never are conditions under which the yield as between comb and extracted will not exceed the ratio of 4 to 5, but as far as wax-secretion alone concerns the question I challenge you to prove that I am not right. I have repeatedly made this challenge—or one very similar—and in something like two years it has not received an attempt at answer.

Come over some evening, Mr. Cogitator, and we will play checkers and talk bees, and have a good old bee-convention. Will you come? Larimer Co., Colo.

The "Long-Idea Hive" and Its History.

MR. YORK:—I would like to ask in regard to the hive Mr. Poppleton uses. What is the size of the frame, and how many does he use for extracting? I have a few one-story hives with frames 11½ inches deep and 12½ long, with 16 in a hive. Would you consider it a good hive for extracted honey? There is no surplus arrangement on top of this hive, the honey to be extracted from the outside brood-frames. F. EATINGER.

[We referred the foregoing questions to Mr. Poppleton, who kindly replied as follows:—EDITOR.]

EDITOR YORK:—At your request, I will try to answer Mr. Eatinger's questions.

The frames I use are what is commonly called the "American frame," said to be 12 inches square, but mine are actually 11½x11½ *inside* measure, being practically the same as Mr. E. has. In my opinion a shallower frame than these should never be used in single-story work.

Sixteen frames are not enough. My hives will hold 24 frames each, with a thin division-board in each end. One of the advantages of this method of working bees is that

the number of combs in use can always be adapted to the size and needs of each colony. When working with my bees, I almost always have empty combs within reach, and to every colony I find with too few combs I add as many as are needed, be it one or more, and take away from any that have more than they need.

My colonies occupy all the way from 3 to 24 combs each, according to their strength, but I consider one that needs only 16 combs during the honey season as not being up to standard.

If I were again to keep bees in Iowa, and not practice migratory work, I should use hives that would hold three or four frames more than do the ones I am now using.

The Long-Idea hives were referred to in "Beedom Boiled Down," in your issue for Nov. 10, 1898, also a statement from Mr. Gallup that the two he tried were comparative failures. See article in Gleanings, page 13, of last year, for a history of these hives, origin of the name, and also reason why Mr. Gallup failed with them. The Gallup frame is not suitable for working in that manner, his own method of using that particular frame being the best.

Dade Co., Fla., March 28. O. O. POPPLETON.

[The article in Gleanings, to which Mr. Poppleton refers, reads as follows:—EDITOR.]

On page 634 of Gleanings for Sept. 1, Mr. Doolittle gives a version of the history of "Long-Idea" hives, and some remarks on their use. While the history of the origin of any of our implements or ideas may be interesting, they are, of course, not of practical value; but I feel very much like trying to correct the historical part of Mr. Doolittle's remarks.

About 1870, Gen. D. S. Adair, of Kentucky, devised and (I think) patented what he named the "New-Idea" hive. This hive was a long single-story one with the entrance in one end, at the side of the frames, instead of the ends, as commonly practiced. The "new idea" of the General was, as I understood it, having the combs containing brood all in the back end of the hive, with surplus honey arrangements all between entrance and brood, compelling the bees to pass thru the surplus honey part of the hive to reach the brood, instead of thru the brood-nest to the surplus honey, as in tiered-up hives.

I do not know who first changed from Gen. Adair's end entrance to having an entrance in the side of hives, and brood-nest in the center instead of in the back end; but I think the change was made and experimented with by a good many of us at the same time. It was not Gen. Adair, who gave the name "Long Idea" to the hive. I have always thought the name was first given to it in derision; but as no other yet used describes the hive so well, it has become the recognized name.

The discussion over these hives occurred when I was first starting my apiary in Iowa; and after trying both styles for a year or two, I adopted the long single-story hive, and still use it, not having a single double-deckt hive in my apiaries. I used about 500 double-story hives for two years in Cuba, and was very glad to return to my own style. I would no more think of using a two-story hive for extracted honey than Mr. Doolittle would think of using the single story.

The truth is, Mr. D. probably has no knowledge of a properly made single-story hive. Neither the Langstroth nor Gallup frames can be successfully used in such manner. To use the right amount of combs in either of those frames will spread them out too much—doesn't leave them in as compact a form as they should be for successful use. I have told a great many bee-keepers who askt my advice, not to attempt to use shallow or small frames in such a way. Some of the foreign bee-journals, according to a review of them by Mr. Thompson, have lately been discussing this matter quite fully, and the conclusions they arrived at were similar to my own—that only deep frames were suitable for use in such hives.

Let me review Mr. Doolittle's objections very briefly. I can work a single-story hive much easier than a double story. The extra depth of my frame, and a little higher stand makes the top of the hive the same height from the ground as the top of a two-story Langstroth. I shake my bees inside, not on top of my hives, and avoid the trouble of crawling bees he speaks of. If I remember rightly, I used to be as successful as the average of bee-keepers in wintering my bees in Northern Iowa, and I used the long hive entirely, Mr. D.'s non-success with only two hives to the contrary notwithstanding. O. O. POPPLETON.

Dade Co., Fla., Nov. 18, 1898.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY A SHORTHAND REPORTER.

[Continued from page 214.]

GETTING THE PUBLIC TO EAT HONEY.

QUES.—What can be done to get the public to eat more honey?

A Member—Sell them better honey.

Dr. Miller—There is much in that. At one time I had some very poor honey-dew—miserable stuff. I put it on the market and insisted people ought to buy it because it was honest honey, gathered by the bees. I hurt myself greatly by that. If you want people to eat honey, you must give them good honey. There is a great deal of very poor extracted honey put on the market; I don't blame people for not liking it; if they get good, ripe honey they will use more of it. The quality of the honey has a great deal to do with the public consuming a large quantity. Give them a good article and they will like it and use it. There is some honey so poor that they ought not to like it; then there are other things, and we might take up the whole afternoon arguing on this, and I would advise you to suggest thru the American Bee Journal any time what you may have found to help increase the consumption of honey; but you will find that a great deal lies in giving the public a good quality of honey.

Dr. Peiro—There is another reason for it; the chief reason is, people don't know anything about honey. Where can you get it? What does it cost? Many such questions are askt about honey. People don't read the bee-papers, and they are the only journals that say anything about it. It needs some stirring up—some advertising. I don't see many advertisements; in fact, the honey is all right if the people only knew it was all right.

Dr. Miller—It is not all right. Some of it is unripe.

Dr. Peiro—I mean honey; I don't mean fraud honey. I don't care what you have to dispose of, if you don't advertise it in some way you are going to "get left." I think the problem to-day is, how to reach the public. You will not sell it unless you interest the public in it.

MAINTAINING A CERTAIN NUMBER OF COLONIES.

QUES.—If you have a field that will normally support 100 colonies, and we call this a working capital—during a series of years how near can this working capital be maintained?

A Member—If I understand the question, I should say it can be entirely maintained.

Dr. Miller—The question is, how nearly can it be maintained?

Pres. Beers—A hundred colonies ought to keep 100 colonies going.

Dr. Miller—If it will normally support 100 colonies, how nearly can those 100 colonies be maintained? As I understand it, how long will it take to run out this 100 colonies? With proper management I should say those 100 colonies ought to be kept up year after year. You hear it spoken of sometimes as bees running out. Here is a man that had so many colonies, and got along so and so for a number of years, and then run out; but I think with proper management in breeding, 100 colonies, without any fresh blood being thrown in, might be kept up.

Mr. Moore—Dr. Miller, take the 100 colonies you had in 1888, how near has that 100 colonies maintained itself without outside money of yours put in for any purpose up to now, good and bad years?

Dr. Miller—I think I partly understand you, it has partly supported myself and family.

Mr. Moore—That 100 has given a net income of so much a year?

Dr. Miller—They have given something, certainly. I don't mean that the 100 colonies supported myself and family—they couldn't do it; but that 100 colonies as a working capital will give an income.

A Member—It will average for 10 years an income?

Dr. Miller—Certainly; it has for 35 years.

WHAT ABOUT APIS DORSATA?

QUES.—Do we want the importation of the Apis dorsata from the new American territory—the Philippines?

Mr. Hammersmark—I think if we were familiar with it we would want it. I think we would all vote for it if it had a longer tongue and could be domesticated.

QUES.—If they build only a single comb would it be worth while? Would they build a number in a hive?

Dr. Miller—I don't know, unless you get them under stress in the hive to do differently; that is what they do left to themselves.

Dr. Peiro—I would like to ask if the long tongue is all they have in their favor?

Dr. Miller—There might be a decided advantage in this because of the red clover; it certainly would be a desirable thing where the red clover is plenty, to have a bee that could get the honey from it. If Apis dorsata can be domesticated, there would be a gain; but if it cannot be domesticated, or cannot live even tho it should be brought into this country, it would be no gain; because even tho it could be domesticated it might not be able to stand the climate here.

A Member—If it is a fact that they are very heavy wax-gatherers, would they not be absolutely useless to us? They would be all right for the extractors, for those that extract honey, but not for the comb-honey producers.

Dr. Miller—You think the comb would be too heavy?

A Member—I don't believe you could get enough honey from them, and you would have to sell it at a lower price. It would not be as good for eating purposes. You would have to gather the wax up and put it at the side of your plate. They might be all right in this country for those that run for extracted honey alone, but for comb honey, what I understand of them, they would be perfectly useless.

BOARD OR CUSHION OVER FRAMES IN WINTER.

QUES.—What is best, a board or cushion over frames in winter?

Dr. Miller—That depends a little upon what there is above the board or the cushion. Perhaps taking it in general, the cushion may be better. There may be at the present day a tendency to have a single board cover over the bees; the objection to that is, that it is cold; that the heat is conducted away from the bees thru that single thickness of board, and really we need a different hive-cover from what we have—one that has a thin board, and something like an air space. There are some advantages in having a single board cover, and perhaps there are so many that it is better not to use the cushion at all; a great many don't use it, because you can have it summer and winter the same; but as far as bees are concerned I suppose there is an advantage in the cushion, as it is a better non-conductor, and if you have it so the air can get thru, the moisture will escape and not be condenst in the hives. So in answering that, which is the best, I should say the cushion is the best thing if only the comfort of the bees is to be considered, but there are so many other things in the case that I prefer to have a board cover, and my bees are all covered with board covers now.

COLOR OF HIVES IN SUMMER AND WINTER.

QUES.—Would it be advisable to have your hives black in spring and fall, and white in hot weather?

Dr. Miller—Possibly. In the spring and fall you want to get the heat from the sun, and the black will absorb the heat better than the white; and in the hot days in summer you will have the white to keep the hives cool. If you have the hives in a dense shade, it does not matter much what the color is. If you have them out in the sun, there would be a decided difference, but if well shaded there won't be that difference. Many think that if you have your bees in dense shade then you will have them cool, and there will be no danger of combs melting down. The most combs I ever had melt down was in a place where the sun didn't shine all day long.

Mr. Moore—Mr. G. M. Doolittle has a building arranged for ripening his comb honey; he has it painted black, with a southern exposure, and he is able to keep it an even temperature for weeks. Black is the highest absorber of the sun's rays, white the least. Black takes it all in; white glances it off.

Mr. Clark—What is the thickness of his walls? If the walls were double thickness, take a one-inch board painted black, then fill in with sawdust or packing, then a board inside of that. I could imagine the black retaining the heat and causing an even temperature; it must be specially built, painted black, to keep that even temperature.

Dr. Peiro—Practically, does it pay to paint the hives, say twice a year? Is the amount of paint required more than offset by the good it may do?

A Member—Doesn't that fool the bees when they get into a white hive and then a black one?

Dr. Miller—So far as fooling the bees is concerned, you need not count on that, because you paint them at the same time. The other is practically a question we have to meet. Is it a desirable thing to paint the hives? If I lived in Cook County, the probability is that I would have all my hives painted; but I live far out in the country, and don't have my hives painted.

Mr. Moore—How are they shaded?

Dr. Miller—Some of them are shaded, some of them are out in the sun; if trees would never die they would all be shaded. Mr. Doolittle thinks he is very sure about it, that he would not have his hives painted if you would pay him, because he thinks the bees are better off in unpainted hives. I think he is right, but I don't feel as sure as he does.

A Member—Don't you think the construction of the hive has much to do with whether they are painted or not painted? Some hives are only single wall; some double; the double are better painted than not painted.

Dr. Miller—Perhaps there may be something in that; I can't say. I don't know that it would make any difference to the bees whether double-walled hives were painted or not. So long as you are talking about single-walled hives I would not have them painted.

Mr. Moore—I have experimented a little this summer, and I am dead sure what I want, but I don't know how to accomplish it. I want my hives unpainted in the spring and fall, and I want them white in the hottest weather, because the white paint will protect the hives from the excessive heat. How can I have black when I want it?

Pres. Beers—Paint them twice a year.

Dr. Miller—Of course it would be too much expense and trouble painting twice a year; you can accomplish that by shade boards to a large extent. I very much doubt if you would care for them in the fall, or in the spring; in the spring you want the benefit of the heat, and to let the sun shine directly upon the hives. Suppose you have a single-hive, you get the heat and are all right in the spring; that part is easily managed, but now comes the summer, and you want to have them protected from the sun. If you live out in the country where you can get long slough-grass, put a good armful on the hive, and put a stick of fire wood on that. I don't know of a better covering, and it is a good non-absorbent; it gives shade and protects from the heat of the sun. You can put some kind of a board covering on, a temporary rough one, but I believe I would a little rather have long-grass covering.

The convention then adjourned to meet the first Thursday in March, 1899.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Increasing and Italianizing Colonies.

1. My bees are hybrids and I want to Italianize them this year; this is my plan of doing it—will it work all right?

I want to send for a tested Italian queen early in the spring and introduce her to one of my hybrid colonies, and as I am going to increase by dividing this year, I thought, by swarming-time, I would close all the hive-entrances of the hybrid colonies with drone-excluders, so that the young queens from the nuclei would be mated with one of the drones from the hive having the tested Italian queen. Then to Italianize those colonies from which I built up the nuclei (for the queens of those colonies will still be hybrids), I thought I would take the queen from one of them, and also take away the brood and eggs from that colony, and exchange it with the one having the tested Italian queen, and so let the colony from which I took the hybrid queen rear queen-cells from the Italian queen's brood and eggs. Then, after they have reared a number of Italian queen-cells, I want to give each of the old colonies having the hybrid queens an Italian queen-cell.

2. How early must I give the colony from which I want to rear Italian drones, the Italian queen? I mean the colony in which I want to put the Italian queen that I send for? Will it

be time enough if I introduce her say about the beginning of April? And will this tested queen have time enough from the beginning of April to rear drones for use by swarming-time?

IOWA.

ANSWERS.—1. You will find some difficulties, probably. Shutting in drones will make little difference if others have dark bees within a mile or less. If you succeed in having your queens mate as you desire, it will be close in-breeding, which is not considered very good. Something depends on the number of colonies to be treated. If the number is small, it may work very well. If the number is large, be prepared to meet some disappointments, and to secure a smaller crop of honey this year.

2. Very likely it will be as well not to introduce your Italian queen before April or even later. She can have plenty of drones a month later than the time she is introduced, providing the weather is warm and honey yielding. If you have two Italian queens not related, rearing queens from one and drones from the other, your success will be better, but as before said, if neighboring beekeepers have hybrids your chances for purity are lessened.

A Question on Management.

I have 30 colonies of bees in two-story eight-frame dovetail hives. They were united last fall and wintered on the summer stands without any loss so far. I intend to run them for comb honey. I want to take away the under story and let them swarm naturally, then hive them in it on the old stand, depending upon the swarm for surplus; then unite in the fall.

1. What do you think of the plan?
2. What percent of the lower stories do you think I will get?
3. When must I take them? WIS.

ANSWERS.—1. It may work quite satisfactorily.

2. I really don't understand what you mean. If you mean what percent of the lower stories you will have swarms to put into, that's a thing no one can tell anything about. If the season is poor enough you might have no swarms. If that isn't the right drift for your question, please ask more fully.

3. You might take them away just before, or at the beginning of, your honey harvest. In some cases there will be brood in lower stories, which can be given to other colonies which haven't brood in as many as eight frames.

Getting Bees Out of a House.

A neighbor wants me to take out several colonies of bees that have taken up their abode between the studding of his house, entering thro a crack on top the veranda. The house is nearly new and well painted. One colony stored a lot of honey in another house here, that melted one hot day, spoiling the plaster. How can I get them out without spoiling the house? NEBRASKA.

ANSWER.—Find out about where the swarm is located by listening carefully with your ear against the wall. Make a hole in the wall in addition to the hole that the bees have been using so that one hole shall be above the other. If one hole is already near the bottom of the space occupied by the bees, make the other hole as near as possible to the top of the space, and vice versa. Put some rags very strongly saturated with carbolic acid in a smoker and blow into one of the holes till the bees run out of the other. Of course you can't get out any of the combs without cutting the wall. If the only object is to be rid of the bees without caring to save them, there may be no need to make a second hole. Just squirt a lot of carbolic acid into the hole that is there.

Closed-End vs. Loose-Hanging Frames.

In your answer to a question on page 150, in regard to closed-end frames *vs.* open-end frames, you say "the advantage is more than counterbalanced by the inconvenience in handling, unless I am mistaken," which it seems to me you are. I have handled bees in frame hives in a small way for a good many years, procured my first swarm in 1856, and the larger part of the time in hanging frames, but for the past 10 years I think I have had all, or nearly all, closed-end frames, and I think them very much easier to handle than the hanging frames; that they are warmer, and that bees breed up faster in them in the spring than hanging frames no one will doubt, I think, who has ever tried them.

My hives are 8 frames, but if I were to start in now I would make them 10 frame. My section of the country (southern New Hampshire) is quite 1,200 to 1,400 feet above sea-level, and we need a warm hive. My bees are wintered on the summer stands. Some years we get a fair quality of honey, and a fair amount, but in others hardly enough for the bees themselves, tho I think almost every season there is honey enough, but the weather is wrong just at the time when the bees would get a good supply if conditions were favorable.

When you try closed-end frames until you are accustomed to them I think you would hardly like to go back to hanging frames, tho perhaps propolis troubles more with you than here, but we have plenty of it. N. H.

ANSWER.—All do not think alike about things in general, nor about hives in particular. It may be on account of the hives themselves, and it may be on account of something else. All do not have the same management, and so what suits one may not suit another. As closed-end frames have been in use nearly as long as hanging frames, they are by no means new things, and it seems pretty clear that the majority prefer the hanging frames, considering the large number in use. It is possible that if I tried the two kinds *that we have had*, I might prefer the closed-end frames. I hardly think I would prefer any closed-end frame to the hanging frames I now use. I certainly know that I prefer the ones I am using to either of the kinds of closed-end frames I used, and they were among what are considered the best, and I think I gave them a fair trial. But they were so unsatisfactory that they are now untenanted. But I am quite willing to concede that others may have a different preference.

Albino Bees.

Are the albino bees equal to the Italians, as honey-gatherers? Are they any gentler? SUBSCRIBER.

ANSWER.—As a rule, I believe that albino people, or albino animals, are supposed to be somewhat lacking in vigor, but it is possible that some albino bees may be just as vigorous as regular Italians. I think albino bees have a good reputation for gentleness.

Thin Foundation for Brood-Frames, Etc.

1. Will thin foundation do for brood-frames? If not, why?
2. Can I extract frames not wired or fastened at the bottom, and partly to the sides? I have no extractor, but will get one if those combs can be extracted. They are the large Langstroth or brood-frames. KANSAS.

ANSWERS.—1. The chief objection to thin foundation for brood-frames is the sagging. If sufficiently supported by wires or splints, it may do very well.

2. By being careful enough, you may extract if the combs are fastened only at the top.

Comb or Extracted Honey?—Fastening Bee-Veil.

1. Which crop would you rely on one year with another if you could get 12½ cents per pound for comb honey or six cents for extracted?
2. Would you advise always using a queen-excluding honey-board when working for extracted honey?
3. Which is best, wood-slatted or plain zinc?
4. My mother cannot think of any way to keep her bee-veil fastened down at the bottom, so as to keep out the bees. Can you give any hints that will help her?
5. Which crop has the least labor connected with it, comb or extracted? MO.

ANSWERS.—1. Comb. But in some places the other would be the best.

2. Yes, as a rule.

3. Wood-zinc. Yet it is possible you might like the plain zinc. Some excellent bee-keepers do.

4. Have a hem at the bottom through which is run a rubber cord. With a safety-pin fasten it down to the waist in front. If well strecht down when pinned, not a bee can get under.

5. Probably in most cases extracted. That is, it is less labor to run the same number of colonies for extracted than for comb. Yet it is possible they might be run in a slipshod way for comb honey with less labor than for extracted. But it would be slipshod comb honey and would command slipshod prices.

Getting Bees Into Standard Hives.

I have often intended writing you before, but if I waited a week or so some one else in the same quandry would present his case to you, and save me (and you) the trouble.

Don't tell me to get a bee-book; I got them before I had ever seen a hive of bees, except in a picture. Now I suppose you wonder what I *can* have to ask you, if I have any intelligence whatever. But I do not know nearly as much after having bees two summers as I imagined I did after reading a lot of bee-literature the winter of 1896-97. I bought a choice colony from a New York bee-keeper, another here, and transferred them both to Langstroth hives. It took hours—from one p.m. until after six for each one. But I did it, despite advice to get "Ole Mose Livingston," who could transfer, put in "cross-sticks," and make the bees stay, for a dollar a colony.

The first summer I was trying all sorts of experiments, dividing, rearing queens, etc. Last year I had 12 colonies, or perhaps nuclei I would better call them. Only one survived the cold snap, our below zero weather, and all my hopes are centered on that colony and one I bought but have not moved home yet. It is in a tall hive, frames 11 inches wide, and 13 inches deep, inside measure, and slanting bottom nailed on, and the four sides project three inches above the frames. What hive is it?

The colony I have here had a hybrid queen hatcht July 30. They were cross, and so got a chance to build up, as I did not med-

dle with them much. Besides, they were in a Heddon hive, and the Langstroth frames were easier to handle.

I have empty, two more Heddon hives, 16 frames of good combs to each; seven Langstroth hives, combs for three of them; and another of those high hives. I want to get the bees into a Langstroth hive from the tall hive, so as to get surplus in marketable shape, but leave the combs in that hive so as to have an Italianized colony in there later and sell it to some one who does not care for "new-fangled hives" The Heddon hives will go, too, for I am not an expert to handle hives. I examine each frame, and they are too much trouble—16 closed-end frames to a hive. The surplus will be all right, over those hives, but there are only holes cut in the top edge of each frame in the other, any small box is set on top, so I want the bees out. Could I drum them all out into two of those nucleus boxes Doolittle uses, give a good queen to the queenless half, and put them back to care for brood and build up to sell, and put the others in a Langstroth hive on as many combs as they can cover with the queen, Italianize later, feeding them of course? I have some division-board feeders made according to Doolittle's "Queen-Rearing." I think it a good plan, but hope you can suggest something better if it is not. I have the nucleus boxes with wire sides, and was successful with them, but have lost confidence in my own plans. JOHNSTOWN, PA.

ANSWER.—Your letter interested me even before I opened the envelop, for the postmark of that ill-fated city in Pennsylvania where the flood swept so many away brought to mind the many happy days I spent in that city in the long ago. Then it's quite refreshing to find some one who has taken pains to keep her reading up to, and ahead of, her practice. It is a mistake to suppose that this department is mainly for those who have not read up in any text-book; indeed, many a question is askt by those who have had no little experience, and the advice can hardly be repeated too often that to make a success at bee-keeping one should be well read up in one or more of the text-books. Even after that there will be always plenty of room for questions.

Now between you and me, don't you think you ought to be just a little bit ashamed of yourself to let other people ask all your questions for you? What if all should do that way? But it's no time to scold now, after you've commenced asking for yourself.

I don't know the name of your tall hive.

Considering that you want to get an improved queen into the old hive at the time of making the change, your plan of dividing may do very well. But don't operate till the colony is strong, perhaps just before clover bloom. You say nothing about where you will set the two parts, and upon that much depends. If you leave the old hive on the old stand, the other will not do very well unless you give it nearly all of the driven bees. Remove the old hive to a new stand, putting the new hive on the old stand, and all the bees you put in the old hive will stay there, and for a day or two there will be an additional force coming from the old hive, for all the field-bees of the old hive will enter the new one on their return from foraging. The large number of young bees hatching out will make up the loss in good time, and the old colony will be strong enough.

Bee-Keeping in Washington—Foul Brood.

1. What part of the State of Washington is the best for bees and honey? Is any of it good? I would like to know about the east part, also on the coast.

2. What was the final decision of Messrs. McEvoy, R. L. Taylor, and others, about transferring to get rid of foul brood? Is one transferring enough, or should they be transferred twice, the last four days after the first? Should they be starved during the four days? IOWA BOY.

ANSWERS.—1. I am unable to give the desired information.

2. Nearly all agree that the bees must be thrown on empty frames of foundation the second time. The bees are not to be fed during the three or four days, the object being to get them to use up all the infected honey before there will be any larvæ to feed.

Localities for Bee-Keeping, Etc.

1. Is Virginia a good State for bee-keeping?

2. Are the Southern States better for bee-keeping than the Western?

3. Which hives are the best?

4. Do queens live as long as worker-bees? PENN.

ANSWERS.—1. Some good locations in Virginia, some not so good, but I don't know where the best are.

2. Taken as a whole, probably there isn't much difference.

3. All are not agreed on any one hive. Perhaps at present the dovetailed is the most popular.

4. Queens live from a few months to four or five years. Workers in the busy season live about six weeks. Those hatcht in the fall live until some time the next spring.

Running for Extracted Honey—Preventing Swarming.

1. I want to run a few colonies of bees for extracted honey in 8-frame dovetailed hives, and prevent swarming as much as possible. The plan recommended by some is to put one or two frames of brood with the queen in the first story, filling out with full frames of foundation, and putting the remaining brood and bees in a second story with an excluder between. What is there to prevent the bees starting the cells above, and thus cause swarming?

2. Why won't the cells have to be cut out to make it a success? I have never seen it recommended.

3. Would it not be just as well to use no excluder but alternate the brood and combs with full sheets of foundation in both stories just before the swarming season? I have no empty combs. Which plan do you think best, and can you suggest a better one?

4. What do you think of producing extracted honey without using excluders? Are not a good many doing that now?

CONN.

ANSWERS.—1. The great amount of empty room in the story that contains the queen is enough to prevent the desire to swarm.

2. There is no mention of cutting out cells, because none are expected.

3. Your plan is not so sure to prevent swarming, and the frames of foundation will not be so well built out. A frame of foundation between two full combs is often made thin, while the cells of the old combs are unduly lengthened. The other plan has been tried and approved.

4. Probably no one who has tried the two ways thinks it better to use no excluder. With the excluder you never need put brood in the extractor. Read the article by C. Davenport, on page 179. A good many put brood in the extractor, and a good many have thus a poorer quality of honey.

Combs Left with Honey in Them.

What had I best do with some combs of honey that I have? I left 20 colonies of bees on the summer stands last fall, after packing the upper stories with forest leaves; but after the extreme cold weather that we had for 20 days (the thermometer hardly ever registering above zero, and at one time 48 degrees below zero) there was not a live bee in the whole 20 colonies. Now, after the weather gets warm enough for bees to fly freely, would it do to let my other bees—some 51 colonies—carry out the honey from the first-mentioned hives, and save the combs, and after cleaning hives and combs, use them for putting swarms on, the coming season?

How would it do to clean up the hives and combs as well as I can, and put swarms right on the combs with honey in them, putting sections on swarms right away, or soon after putting the swarms into the hives? WISCONSIN.

ANSWER.—Either plan you mention will work all right. Only, if you allow the bees to rob out the honey, be sure not to move any of the hives they are robbing until several days after all the honey is cleaned out. There is danger that worms may trouble the combs before swarming-time, so perhaps the best thing is to put each empty hive under one of your good colonies till swarming-time. That will make them safe from worms, and it will also insure their being cleaned up well.

Brood-Chamber Crowded with Honey.

I have just bought 3 colonies in 8-frame Langstroth hives. They seem to contain a good deal of honey, and I should think that by and by there will not be enough room for brood. They weigh about 50 pounds each. I am a beginner, and have no extractor as yet. Would it do, when the combs now empty are getting full of brood, to take the two outside combs of honey and put them in the middle, and put on a super? Would the bees take the honey up and store it in the sections? We are earlier here than you are; I had a swarm out on May 12, last year. B. C.

ANSWER.—You will probably find that the bees will use up more of that honey in brood-rearing than you suppose. You will hardly find it satisfactory to try to get the honey carried into sections. It's a good thing to have some combs of sealed honey on hand in case of need.

Keeping Bees in a Garret.

I wish to ask you in regard to putting a colony of bees in the garret of a house. I want to put them in the north end so they will face the north. Will that do, or would it be better to face the south? Give directions how to build such a hive. A neighbor wanted me to construct it for him in his house. The house is heated with hot air, and can be regulated. ILLINOIS.

ANSWER.—It is generally considered that bees will do better facing south than north. A hive for a garret may be built the same as a hive for out-doors, the special point of difference being that particular pains must be taken to have a passage-way from the entrance of the hive to the outside by means of a passage-way that shall allow no bee to get out into the garret.

Brood-Combs with Candied Honey.

What can I do with candied honey in the brood-frames? Will the bees remove it, or shall I destroy the combs? KANSAS.

ANSWER.—I think I would try the plan of M. M. Baldridge. Spray the combs with warm water and give to the bees, repeating the spraying as often as necessary.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

THE DREAMER.

Let the dreamer lie at ease
And gaze at the bright blue sky,
Lulled by the murmuring bees,
While the summer winds go by.
Tho its skies be cold and gray,
Be this thy heart's content—
That thine is the sweeter day
In useful labor spent.—Farm Journal.

Honey Leaflets as Honey-Sellers.—Editor Root, of Gleanings, finds a number of his readers report that honey leaflets are not a success as honey-sellers. He thinks the trouble is that they are gotten up in too cheap a form; that something more expensively and attractively gotten up might do better, and asks for opinions.

We think the trouble has been that nearly all the leaflets put out so far have been too large—there is too much to read. Busy people haven't time to wade thru so much. Perhaps a single leaf printed on both sides in clear type like this would be better. Say a leaf of paper about 5x8 inches. It might have two or three small pictures on it.

But, after all, much depends upon the honey itself. If it is of as good quality as it ought to be, and prospective customers get a good taste of it, they will buy if they really want any honey, and if the price is right.

Many people do not care for honey—wouldn't eat it if it were on the table every meal. But there are enough people who do like honey to use every pound that can be produced, if only it could be brought to their attention. How to do that thing is one of the great questions yet to be satisfactorily solved. If any of our readers know *how*, and wish to help, our columns are open.

LATER.—In Gleanings for April 1, we find the following in reference to the use of honey leaflets, from Mr. Dan White, who seems to know *how* to use them:

Now, then, Mr. Editor, you want our views. Should the leaflet be more expensive? I might suggest one verse or a few lines added for the *express* purpose of cutting out and pasting in our hats. I should want it to read something like this:

"Don't waste these leaflets, throwing them on porches, and scattering them around promiscuously.

"Don't use these leaflets if your honey is not of good quality and *thoroly* ripened before it was extracted.

"Don't forget, when you do make a sale of *good* honey, to hand the customers a leaflet.

"Don't forget to tell them that it will teach them how to warm up candied honey; it will educate them quite a little.

"Don't forget that very *few* are educated about honey and bees.

"Don't forget that half the people hardly know what honey is. They should and will if we do our part well. Those leaflets will help do the talking.

"Don't forget to leave a sample of honey when you call from house to house.

"Don't forget to leave the leaflet and your name and address, because, after they eat the *good* honey they will read the leaflet and then say, I *must* get some of that honey."

Don't you see we almost compel them to read those leaflets, and also buy our honey? Don't forget to stay at home, tho, if your honey happens to be a little off—so much so that your own family don't like it. Don't forget that poor honey sells poorly, just the same as any other poor thing. Don't forget those leaflets are all right if you know how to use them rightly. Don't forget to take off your hat every few days and read these *don'ts*. Don't forget that, if the leaflets are all right in one place, they *must* be so in other places.

Order Bee-Supplies Early is the usual annual advice to bee-keepers at this season of the year. Experienced honey-producers hardly need be so reminded, but the beginners, or those of limited experience, perhaps should be advised to have on hand, in ample time for use, all supplies that will likely be required during the honey season. Be prepared for whatever comes, whether it be a large crop or a failure.

Howell's Scripture Honey-Cake.—The whites of eight eggs well beaten, Job. 6, 6; one-half cup of butter, Gen. 18, 8; one cup of honey, Gen. 43, 11; one-half cup of sweet milk, Gen. 18, 8; flour to make a stiff batter, Leviticus 2, 2; spices and almonds to suit taste, Gen. 43, 11, and a little leaven, 1 Cor. 5, 6. Bake it to-day, Exodus. 16, 23.

Great Britain's Honey Imports during 1898 amounted to about $120,000. So reports the British Bee Journal.

Smart Bees in Texas.—The Evanston (Ill.) Index contained an item in regard to some "smart bees" in Texas. Mrs. N. L. Stow, vice-president of the Chicago Bee-Keepers' Association, saw the item and kindly handed it to us. It reads as follows:

"The busy bee has long had a reputation for industry, but I always considered it rather conservative until I ran across the up-to-date variety that does business in the Fort Davis region of west Texas." So spoke a former journalist, now a railroad man. "They have some of the finest honey in the world out there, and its delicate flavor is due to the blossom of a shrub that grows profusely on the mountain sides. The trouble is, however, that the flowering season

of the bush is brief, at a given altitude, and the bees have to follow their favorite food higher and higher as the season advances. Now, you know the bee makes a 'bee-line' for the hive as soon as she has soakt her feet in the liquid sugar of the flower.

"Well, the west Texas bee evidently found it very inconvenient to climb all the way down to the valley with each load of honey, and some smart bee struck upon a plan as simple as it was unique. It is generally known that the self-same shrub that gives honey to the bees produces a succulent root, upon which as big and rocky-looking a lizard as you ever saw feeds and fattens. This creature, called a 'yollo' by the Indians, is 14 inches long, and is too lazy to get out of its own way. The yollo's back bristles with points, and he is terrible to behold, yet to the bee he is only a God-send, and without the least fear a swarm will proceed to establish its comb between the points of the yollo's pachydermatous back, and without ado fill in the honey. The beast, of course, following the food-plant, will keep the hive always within easy walking distance, and in the fall, when the season is over, the bees swarm back into the lower level, while their diminutive pack-mules wind down the mountain paths to the valley, where the honey is quickly transferred to its winter quarters in the bees' trees or the ranchman's hive."

Perhaps some of our readers in the locality referred to can tell us something further about this. More than likely it is "only a bee-story."

The Philadelphia Bee-Keepers' Association is thus spoken of by the Philadelphia Public Ledger:

There are many associations of bee-keepers in America and Canada, but of them all that of the Philadelphia bee-keepers is the oldest, and in its day has been the most prominent and influential. Its origin and continuance, and the good work done in and thru it, have all been due to the efforts of the president, Dr. Harry Townsend and his good wife, both of whom are devoted friends of the honey-bee, and thru all the years have had faith that some day its economic importance would be recognized, and farmers, villagers, and even city people, would come to understand that with its aid a luxury could be added to the table, and dimes to the pocketbook, and from the otherwise wasted sweets in the flowers of field, forest and garden.

As the United States Bee-Keepers' Association will hold its next annual meeting in Philadelphia, its members will have the privilege of meeting the members of the Philadelphia association. We wonder if it really is older than the National society.

Tin Cans vs. Barrels for Honey.—We hope that tin cans will be considered more favorably this year by those who have been using barrels heretofore for holding extracted honey. Cans may be a trifle more expensive, but they are ever so much more convenient for handling, and for reliquefying the honey. Then they seldom "spring a leak" as do the barrels. Neither do cans soak up a lot of honey, and thus cause waste and loss to the shipper or buyer. There are so many evident advantages possest by cans over barrels that all need not be enumerated here. We trust that the leaky, bulky, cumbersome honey-barrel may soon be a thing of the past.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premium offered on page 236 is well worth working for. Look at it.

Hon. Eugene Secor, of Winnebago Co., Iowa, wrote us April 5:

"Two days of spring. Bees are still in the dark. Considerable loss is reported."

* * * * *

Mr. Wm. Fricker, of Hampshire Co., Mass., when sending a new subscriber for the Bee Journal, March 23, wrote:

"I have taken the American Bee Journal over a year, and I *am more than satisfied*. No bee-keeper should be without it."

* * * * *

The Farm Journal is the boiled-down, hit-the-nail-on-the-head paper, cut to fit the wide-awake farmer and villager. We give the Farm Journal for the balance of 1899 and all of 1900, 1901, 1902 and 1903, nearly five years, as a premium to every one of our subscribers who will accept the offer on page 222.

* * * * *

Mr. G. M. Doolittle, of Onondaga Co., N. Y., wrote us April 3:

"Snow and cold here with no let up for spring yet. Bees out-doors are in bad shape, with many dead, as they have had no good chance for a flight since last November, or nearly 4½ months."

* * * * *

Dr. C. C. Miller is not only a prominent bee-keeper, and a leading writer on bees, but he is also a well-known worker in the Presbyterian church. He bears the distinction of being the only layman in the State of Illinois who is chairman of any of the many committees of the synod which comprises the Presbyterian churches of the State. Sometimes we are inclined to think that it is the Methodist blood in him that helps to make him a good Presbyterian. You know it is said that "blood tells."

* * * * *

Mr. O. O. Poppleton, of Dade Co., Fla., wrote us March 28:

"My honey season is just coming on. As I wrote you a short time ago, our bees are not in their usual strong condition for the time of year, and altho the saw palmetto promises an unusually large flow of honey, the lack of strong colonies will prevent my getting a full crop. Other bee-keepers up and down the coast, whose fields were not so badly fire-swept as mine were last spring, tell me their bees are in their usual condition."

* * * * *

Mr. C. A. Hatch, of Richland Co., Wis., vice-president of the United States Bee-Keepers' Association, wrote us April 6:

"Friend York:—According to present indications there is to be no very serious loss of bees in our part of Wisconsin. I have talkt with four or five bee-keepers representing an ownership of over 600 colonies, and only one reports serious loss, and this lot were wintered out-of-doors protected by straw packing only. Of course, bees are in the cellar yet, and putting-out time may change things somewhat, but I think not much.

"It is too early to say much about the honey prospect, but I can say this much, white clover does not appear to be injured. I hope for a good honey season, and a prosperous year."

* * * * *

The Fearful Traveler.—Dr. Peiro has traveled a good deal, and makes the following observations:

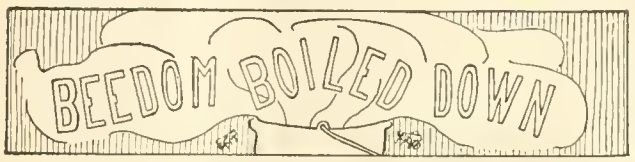
"It is almost pathetic to note, in traveling, the fear some display at their surroundings. Not from danger of accidents, but dread of the evils that may befall them from contact with their fellow travelers.

"From childhood they have been admonisht regarding the subtlety of strangers that the unfortunate credulous are at once on guard, and the defensive, lest every hand but their own be raised against them. The anxiety they display on this score is manifested by the ludicrous efforts

they make for the safe keeping of their treasures. They not only frequently glance in the direction of their stored valuables, but inadvertently clasp their hands over them for greater assurance, thus revealing their secret to such as might annoy them. This constant fear greatly mars the pleasures of traveling. The only class likely to come to grief is the ignorant and vainglorious, anxious to display their 'Smart Aleck'-ism to all who seem to cater to their conceit. These fools—they are generally from 18 to 24—deserve the punishment they so glaringly invite.

"The better way is to modestly attend to one's legitimate business, and conclude that our fellow travelers are as reasonable, civil and as honest as ourselves. This principle will secure for us due respect and avoid disappointments.

"DR. PEIRO."



To Secure the Whitest Sections, Mr. Shaver, of Canada, allows no sections to be sealed over old brood-combs. Colonies with old combs are allowed to build combs in sections and fill them, but, as the capping process is begun, the super is transferred to a colony of the current year.—Bee-Keepers' Review.

Keeping Bees Good-Natured is considered by T. F. Bingham, in the Bee-Keepers' Review, and the moral of his discourse is that if we would get along in towns without having complaints from neighbors as to cross bees, we should keep a *cloud* of smoke in the apiary when working with them. A good bit in that. It is also quite possible that Mr. Bingham had in mind that if more care were taken in this respect there would be more Bingham smokers in use, and there was nothing wicked in the thought if he did think so.

The Secret of Successful Honey-Production, according to Messrs. Aikin and Doolittle, in the Progressive Bee-Keeper, lies in so manipulating colonies as to have the maximum number of bees on hand ready for the harvest, and those bees without any desire to swarm. To prevent swarming, Doolittle says cage the queen for 10 days just before harvest, then cut out *all* queen-cells, cage the queen, or one just commencing to lay in her place, in a cage with a stopper of candy that will take the bees about two days to eat thru, and swarming is done for six weeks, and for the whole season unless the honey-flow is long drawn out.

Latest Development in Weed Foundation.—A series of illustrations in Gleanings show thicknesses of walls and bases in natural comb and in different kinds of foundation, running from five to 13 feet to the pound. It seems to be a question that has not been fully settled in the minds of all whether it is better to have extra wax in the base or in the incipient side-walls, or whether the bees would thin either or both. The latest effort of Mr. Weed is to produce foundation with a very thin base, with a side-wall not very deep but containing considerable wax. The experiments of Hon. R. L. Taylor showed a thinner base in Given foundation than in others, notwithstanding the fact that rolls would make a more regular and a nicer-looking article. Editor Root says that "experiments show that we can stick as much wax as we like in the walls, for it will be thinned down; but we must be careful about getting too much in the bases; for while the bees *may* thin it there, they rarely do; and the excess of wax, therefore, in the bases is simply so much waste product, and who pays for it? The bee-keeper, and not the supply-dealer." At present the new product is made with plates, in sheets large enough to fill a section, the thickness being about ¼-inch.

Spraying Fruit-Trees.—J. W. Rouse says that spraying trees when in bloom shows ignorance on the part of the sprayers. The time to spray depends on the object of the spraying. For fungus, before bloom. For codling-moth, after the bloom has fallen, as the moth does not deposit her eggs until the fruit is set. For information as to spraying, send to Cornell University, Ithaca, N. Y., for Bulletin No. 101 (The Spraying of Trees), also Bulletin No. 86 (Spraying of Orchards), both being sent free, as also Farmers' Bulletin No. 7, sent out by U. S. Department of Agriculture, Washington, D. C. The best of all is the Spray Calendar, issued in 1895 by Cornell University Agricultural Station. —Gleanings.

Bee-Keeping No Sinecure in Cuba.—A. W. Osburn's son warns adventurers not to be too rash in rushing into a strange country to make a fortune. Money, big money, can be made at bee-keeping in Cuba, but it takes work, big work. To produce a crop of honey requires 365 days' work in the year. "The tropical sun shines and the flowers bloom the year round." Beginning with March, for an apiary of 500 or 600 colonies, 125 or 150 queens must be reared, got to laying, and colonies must be built up. By May swarming is in full blast, no time for a nap between swarms, and for four months the wax-worm furnishes much employment. Then when the harvest begins to come in, when the 500 or 600 colonies get limbered up and bring in 2,500 or 3,000 pounds in a day, "you have to step around as if you had coals of fire in your shoe." The thought of taking in $125 a day occasionally, is hinted at as no slight offset.—Gleanings.

Boiling Foul-Broody Honey.—J. H. Martin comes in as a pacificator in Gleanings, with the belief that those who hold such diverse views as to the time of boiling necessary to kill foul-brood spores may all be right. He thinks the boiling acts in strata, the lower stratum boiling first, and so on to the top. A small amount will be boiling thruout in a short time, but not so a larger quantity. He advises, "boil a gallon in a large boiler 10 minutes, 20 gallons an hour, 50 gallons three hours." Prof. Hodge, in the same journal, calls attention to the much greater difficulty of destroying the vitality of *spores*, advising at least 15 minutes boiling with thoro stirring on three successive days. The expectation is that by the time of the third boiling all the spores may have vegetated, and as bacilli 15 minutes will be enough to kill them. T. W. Cowan says: "The spores also possess the power of enduring adverse influences of various kinds without injury to their vitality, so far as germinating is concerned, even if subjected to influences fatal to bacilli themselves. The latter are destroyed at the temperature of boiling water, while the spore apparently suffers no damage at that temperature."

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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than it does common stock, and it pays tenfold better. Send stamp at once for Illustrated Catalog and Poultry-Book.

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TWO WAGONS AT ONE PRICE.

It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc. The man who already has a wagon may have one of these low handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 16, Quincy, Illinois, for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

Root's Column

No-Gob Foundation.

We Have it at Last.

It has been proven that wax in the base of ordinary foundation is not utilized by the bees, but is left there practically as it leaves the mill; and the result is, when drawn out into comb, the so-called gob, or fishbone, in comb honey.

Our New Thin-Base FOUNDATION

is exactly what its name indicates—foundation with a base as thin as natural comb, with heavy deep walls.

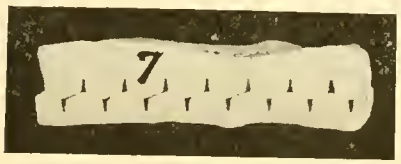

Fig. 7, herewith shown in cross-section from an actual photo, represents the new thin-base heavy-walled foundation running about 10 feet to the pound.

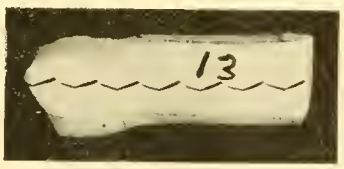

Fig. 13 represents the ordinary thin foundation with heavy base and scarcely any wall, about 10 feet; the heavy base, without modification, going right into the comb honey with very little change, and forming fishbone.

We have so far only small dies, and cannot afford to sell this product for less than $1.00 a pound. Next year, perhaps, we shall have larger dies, and will make a corresponding reduction in price.

Seven or eight pieces, large enough to fill 4¼ sections, 15 cents, postpaid; 24 pieces, prepaid, 40 cents.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bees Came Thru All Right.

The bees have come thru so far all right, but it looks blue for them this morning—April 3—with the ground all covered with snow. I hope this will be a favorable season for them. They are all (some 80 colonies) in the home yard in town. I am not able to go to the country to have an apiary, as I will be 72 years old May 12. I never employ any help, but do all the necessary work myself. Success to the Bee Journal.

D. C. McLEOD.

Christian Co., Ill., April 3.

Organizing in Utah.

We have formed a bee-keepers' organization here within the last month, known as the Uinta Bee-Keepers' Association, starting in with about 25 members. We hope to start other associations, and work in harmony in every respect. We have sent a petition to our congressman in regard to the pure food law. I am pleased with the Bee Journal.

I have not lost one colony out of 96. All are doing well, and have plenty of brood and young bees. G. W. VANGUNDY.

Uinta Co., Utah, March 12.

Poor Season Last Year.

The bees last year did very poorly. I got only about 1,000 pounds of comb honey from 150 colonies. So far they have wintered fairly well. JNO. SCHUMACHER.

Platte Co., Mo., March 17.

Bees Wintered Nicely.

My bees wintered nicely on the summer stands. I did not lose any. They gathered considerable honey from the plum and peach bloom, but everything is too dry for any more until it rains. Crops look bad—wheat and oats drying up. Our corn was bitten down by frost March 28, but is coming out again. D. F. MARRS.

McLennan Co., Tex., April 3.

Backward Spring.

The spring is very backward. Snow has fallen to the depth of over eight inches the last three days. There is heavy loss of bees thruout this section.

E. T. FLANAGAN.

St. Clair Co., Ill., March 29.

Over Half the Bees Dead.

Over 50 percent of my bees will be winter-killed, and the balance in very bad condition, owing to the severe winter. They were on the summer stands. C. BECKER.

Pleasant Plains, Ill., March 28.

Bees Not Wintering Well.

Bees are not wintering well. Those in the cellar are spotting; hives badly. It has been such bad weather that they could not be taken out yet. The ground was covered with snow last night. GEO. L. FERRIS.

Cayuga Co., N. Y., March 31.

"Adel" Bees are "Superior."

EDITOR YORK:—Kindly permit me to correct one statement Dr. Miller made when he replied to the question, "What are Adel bees?" If my memory serves me correctly, he made this reply: "Any strain of Italian bees can be called Adel," or something very much like this.

The bees that I call Adels (properly pronounced *Ad'l*) were bred up in my apiary from the gray Carniolans, which came

Rudyard Kipling's Life

Was saved by the inhalation of Oxygen, the only Specific cure for all forms of living diseases. Office of The Oxygen Company, 34 Central Music Hall, Chicago — to whom all letters of inquiry should be directed.

15Dtf Please mention the Bee Journal.

Mentionthis paper. **EVERGREENS**

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 25 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

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The Midland Farmer

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40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free. JOHN NEBEL & SON,

5Atf HIGH HILL, MISSOURI.

LAST WEEK

we told you there was something in the coil of The Page. As the mercury rises watch the fence and see about it. Does it sag?

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

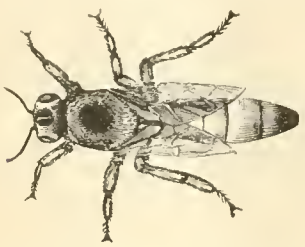
Please mention Bee Journal when writing.

Doolittle's Book Free!

Every Bee-Keeper should have

SCIENTIFIC QUEEN-REARING.

YOU CERTAINLY will have it if you desire to know how to have queens fertilized in upper stories while the old queen is still laying below; how you may safely introduce any queen at any time of the year when bees can fly; all about the different races of bees; all about shipping



queens, queen-cages, candy for queen-cages, etc.; all about forming nuclei, multiplying or uniting bees, or weak colonies, etc.; or, in fact, **everything** about the queen-business which you may want to know. The price of the book is $1.00, being bound in cloth, gold-lettered.

We want 1,000 New Subscribers

Between Now and June 1,

And we would like to have our regular subscribers help us in this work. In order that all who may want a copy of Doolittle's "SCIENTIFIC QUEEN-REARING" may earn it very easily, and at the same time aid in swelling the Bee Journal's list of subscribers, we wish to make the following **Liberal Offers**—only to our present subscribers:

Offer No. 1. We mail the book for $1.00, or club it with the Bee Journal for one year—both for $1.70.

Offer No. 2. Send us **Three New Subscribers** to the Bee Journal for the balance of the year, at **60 cents each**, and we will mail you a copy of the book free as a premium.

Offer No. 3. Or, send us **two** new subscribers to the Bee Journal for the balance of this year at 60 cents each, and 40 cents additional (making $1.60 in all) and we will mail you the book.

Offer No. 4. Or, send us **one** new subscriber for the Bee Journal for the balance of this year at 60 cents, and 65 cents additional (making $1.25 in all), and we will mail you the book.

Now, the sooner the new names are sent in the more copies of the Bee Journal they will get for their 60 cents, and if sent before April 1, each will be certain of getting the Bee Journal for **nine months**, or about 40 copies.

Remember, that only our present subscribers can take advantage of the last three offers above.

Now, let everybody go to work, and help roll up the 1,000 new subscribers.

Address,

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118 Mich. St., Chicago, Ill.

direct from Carniola. Frank Benton, who spent many years in Carniola, says he never saw an apiary of *all* steel-gray bees in that country. In all apiaries there are more or less yellow-banded bees. The native bee-keepers consider the yellow-banded superior to the gray bees, and call them "Adels." Adel signifies *superior*.

Bees are wintering well, tho March has been the worst month of the year; no warm weather, but plenty of small snow-storms. HENRY ALLEY.

Essex Co., Mass.

[If Adel simply means "superior," then of course Dr. Miller was right if he said that "any strain of Italians can be called Adel," provided they are excellent bees. No one has the sole right to the words "Adel" or "superior," any more than to the words "simplicity" or "perfection," as we understand it.

Several of our readers, during the past few years, have enquired as to the meaning of "Adel bees." It seems to us if we were to designate any particular variety of bees, we would call them by some name that would be self-explanatory—some word that could be found in any common dictionary. —EDITOR.]

Wintered Well in a Bee-Cellar.

I have 112 colonies in a bee cellar 15x33 feet. They are wintering nicely. Last season I got one-fourth crop of honey. I hope this year they will do better. Success to the American Bee Journal.

E. R. WRIGHT.

Scott Co., Iowa, April 4.

Wintered All Right.

My bees came thru the winter all right, tho a little short of stores, but with plenty of bees.

I find lots of hints in the "Old Reliable" that come in handy. I wish you success.

J. BRIMMAGE.

British Columbia, March 24.

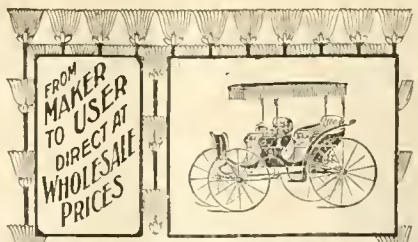
An Old Bee-Keeper's Experience.

I have been reading the "Old Reliable" for two years, and I could hardly keep bees without it now. I have kept bees 25 years, but am a farmer, and, until late years, I was at the head of a dairy and stock farm, but as age came on I had to turn the care of the farm into younger hands, which is run under the name of F. Hall & Son. But I cling to the bees and the garden. I never wintered more than 21 colonies. I used to keep them in box-hives and wintered them buried in the ground, sometimes fairly well and other times not so well. But the soft winter of 1877–78 cleaned out my bees. The last 15 or 20 years I have just put them into the cellar, which I will describe.

All of it has a well-mortared wall, and the exposed sides have a double wall, all cemented on the bottom. The bee-cellar is 8x14 feet, partitioned off by a single brick wall. A window on one side has a wire screen on the outside and a hanging glass window on the inside. In the winter I just bank up that window with straw, and in mild weather I open the inside window and the straw will let in enough air. This cellar just nicely holds 21 hives without tiering up.

Usually about Nov. 10 I put in the bees, and see that they have plenty of air from the bottom, and I aim to put in none but good colonies, but I can't always stick to that rule. I put them on planks on old bee-hives. I don't have any trouble with mice, I just fix the door so they can't gnaw, and keep it shut.

I usually take the bees out about April 1. I never have any mould in the hives, and if they were all in good shape in the fall I don't expect to lose a single colony. There



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WE SELL DIRECT TO YOU From Our Factory At Wholesale Prices.

We have Surries at $31.00; Top Buggies, $35.00; Spring Wagons, $37.60; Road Wagons, $25.00. Excellent Quality Guaranteed.

We Make Every Vehicle We Advertise.

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MRS. L C. AXTELL,
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Thousands in successful operation. Lowest priced 1st-class hatcher made.

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GEO. H. STAHL,
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WE SELL THEM

In order to do this we have to have **GILT-EDGE STOCK**, and make prices right.

Send us a list of what you want for the coming season, and let us make you

SPECIAL PRICE.

Standard Lumber Co.

10Atf MANKATO, MINN.

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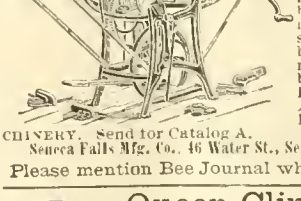

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Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

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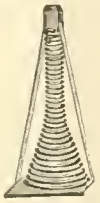

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

DITTMER'S
Comb Foundation
Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

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BEE-SUPPLIES.

ROOT'S GOODS AT ROOT'S PRICES.

Everything used by Bee-Keepers.
Send for Catalog.

C. H. W. WEBER,
Successor to CHAS F. MUTH & SON,
2169 Central Ave., CINCINNATI, OHIO.

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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

The Best Bargain
IS THE
BEST GOODS AT FAIR PRICES.

And that's the secret of our immense trade that has made us

HEADQUARTERS IN THE WEST

For Bee-Keepers' Supplies. We are ready now for the season of 1899 with an immense stock of the latest and best in our line. Send for our 1899 catalog and discounts for early orders.

Address,

JOSEPH NYSEWANDER,
10A8t DES MOINES, IOWA.
Please mention Bee Journal when writing.

SILVER GRAY CARNIOLAN —QUEENS—
ALSO THE
Golden and 3-banded Italian.
Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

C. B. BANKSTON, - Rockdale, Texas.
13Atf Please mention the Bee Journal.

has not been a day this winter that I, being a little deaf, could hear them at all.

In September, 1877, I took away all the queens, which were black, and two days after I had an expert bee-man introduce fertile Italians, without a single failure in 21 colonies.

I have been greatly helpt by my acquaintance with good bee-keepers, particularly the late B. Taylor and D. H. Whitmore, of Minnesota, and S. T. Petitt, of Canada; and by reading the articles written by the great bee-men in the American Bee Journal.

I read much of robbing of bees, and of wax-moths, but I never have any trouble with a colony that is worth having. Often there are moths in the honey after it is taken off, and I always put out in the apiary anything that I want cleaned off. When I "take up" hives in the fall I extract the honey from the frames and put them among the bees, and when they are well cleaned off I put the frames back into the hives, and leave them there till needed again, and I find that by that time the old pollen will have shrunk so that the bees can pull it out. FRANCIS HALL.

Fillmore Co., Minn., March 11.

Very Late Spring.

I have 24 colonies of bees now. The spring is very late here, with 15 inches of snow on the grouud, and below zero last night. C. F. GREENING.

Mower Co., Minn., March 27.

An Experience with Bees.

About 15 years ago I purchast three colonies of bees for $10. At that time I knew little about bees.

My bees are situated to the south and west of my residence. The hives all face east, and are in rows six feet apart and three feet apart in the row. They are all, or nearly all, in chaff hives. The chaff hive, like all hives, has some good points, and some people seem to think a great many poor ones. I talkt with a man who said he didn't like the chaff hives because the bees wouldn't start in the morning until the sun warmed them up. If he had been at my place last summer, some mornings, before sunrise, he would have thought that my bees didn't wait for the sun. Perhaps his bees don't work before sunrise, but mine do.

The spring of 1897 found me with 23 colonies, which I increast to 41, and harvested about 1,500 well-filled sections. My best colony gave me 100 complete sections. Passing the winter of 1897-98 without loss, I increast the 41 colonies the following summer to 58, and secured 1,200 pounds of honey, working exclusively for comb, which sold in my home market at 10 and 12 cents per pound. My honey is all gone, and I could have sold more if I had had it.

I have tried a great many times to get subscribers for the American Bee Journal, but of no avail, as the people had all sorts of excuses, some thinking they know more (about bees) than all the bee-editors and their correspondents put together. One young man, in particular, bought a number of colonies last summer. I tried to have him take the Bee Journal but he did not, and now he has just one colony alive; but he has the bee-fever for sure, for he bought six more at $3.20 per colony, and a lot of old hives at 50 or 60 cents apiece, that were just fit for kindling. My bees were out the 7th, and seemed strong and all right. I have always been successful in wintering bees in chaff hives on the summer stands, but I never could succeed in the prevention of swarming.

My inside hive is the regular 8-frame dovetail, while the outside is made of shiplap siding, the greatest objection being the cost. CLYDE CADY.

Jackson Co., Mich., March 20.

Please mention Bee Journal when writing Advertisers.

FOR SALE.

Fifty (50) colonies of ITALIAN BEES in standard Langstroth hives in good condition. Will sell five (5) colonies, or the lot, at $3.00 per colony. Also one Given Foundation Press, and one Cowan Honey-Extractor. For further particulars inquire of

14A4t MRS. J. W. LeROY, Rio, Wis.
Please mention Bee Journal when writing.

BEES QUEENS
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.
14A4t Please mention the Bee Journal.

CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to keep on hand at the old stand a full, up-to-date supply of all goods pertaining to said business. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment. MRS. ANNIE MUTH, Widow.

ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.
9A26t J. D. GIVENS, LISBON, TEX.

EGGS FOR SITTING Pure-bred Barred
Plymouth Rock, 15 Eggs for $1.00.
Superior Rose Comb Black Bantam Eggs, 15 for $2.00. No other varieties kept.

Italian-bee keepers being men of good taste and sound judgment should beep the best and most profitable kinds of Poultry. Only fresh eggs used, carefully packt and sent by express. Safe delivery guaranteed. D. S. HEFFRON, WASHINGTON HEIGHTS, ILL. 13Atf
Please mention Bee Journal when writing.

WANTED TO BUY A CARLOAD OF **BEES**
10-frame Hives and Hoffman Frames preferred.
15Atf B. WALKER, Evart, Mich.
Please mention Bee Journal when writing.

2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

F. J. GUNZEL, Obear, Craighead Co., Ark.
15Atf Please mention the Bee Journal.

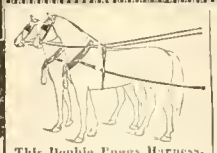
BEES Wanted for Cash
By pound or colony, in any hive, box or otherwise.
BEES I WANT — NOT HIVES. Write at once, and give price, your location, etc. Address,

C. A. HUFF, Clayton, Lenawee Co., Mich.
15A1t Please mention the Bee Journal.

Don't Rent

ESTABLISH A HOME OF YOUR OWN

Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.



This Double Buggy Harness, $20, as good as sells for $30.

WE HAVE NO AGENTS,

but have sold to the user direct at factory prices for the past twenty-six years. We ship anywhere for examination. Everything Fully Warranted. We are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively. Our line consists of Rockaways, Surreys, Traps, Phaetons, Stanhopes, Driving Wagons, Top Buggies, Open and Top Road Wagons, Spring Wagons, Delivery Wagons, Milk Wagons, Wagonettes and all styles of Harness.

Send for Large Free Catalogue.

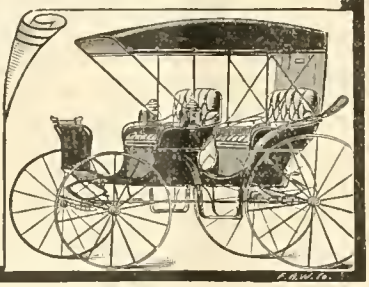
ELKHART

Carriage and Harness Mnfg. Co.,

W. B. PRATT, Secy. ELKHART, INDIANA.

This Extension-Top Surrey with double fenders, complete with side curtains, aprons, lamps, and pole or shafts, for $72.

Just as good as retails for $110.



Please mention Bee Journal when writing.

Convention Notices.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Buena Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Connecticut.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, May 3, 1899.
Waterbury, Conn. MRS. W. E. RILEY, Sec.

THE A. I. ROOT CO'S GOODS Wholesale. Retail.

Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.

Bee-Supplies.

Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

WALTER S. POUDER,
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Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

AUGUST WEISS, Hortonville, Wis.

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Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

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26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G. Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode German by J. F. Eggers. This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

FREE FOR A MONTH ....

If you are interested in Sheep in any way you cannot afford to be without the best and only Weekly Sheep Paper publisht in the Unted States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,

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PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00; each, by mail,	$1.50
Doctor	3½ in. stove.	Doz.	9.00; "	1.10
Conqueror	3-in. stove.	Doz.	6.50; "	1.00
Large	2½-in. stove.	Doz.	5.00; "	.90
Plain	2-in. stove.	Doz.	4.75; "	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50; "	.60
Honey-Knife		Doz.	6.00; "	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4 inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

FOREWARNED IS FOREARMED

Do Not Wait until the last moment to order your Supplies. **You may be disappointed** by delay in shipment and lose a portion of the honey harvest. **Save money and gain honey** by sending us your estimate NOW. We are offering **Special Inducements for Early Orders.** Our 1899 Catalog free.

SPECIAL AGENTS:

E. T. ABBOTT, St. Joseph, Mo.
L. C. WOODMAN, Grand Rapids, Mich.

G. B. LEWIS CO.,

Watertown, Wisconsin.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 8.—Choice grades of white, 12@13c; travel-stained and light amber, 10@11c; buckwheat and dark, 7@8c. Extracted, white, 7@8c; amber, 6@7c; dark amber, 5@6c. Beeswax, 26c.

Stocks of white comb honey are about exhausted, and this is as it should be if a market is to be had for the expected large flow of nectar from the season of 1899. R. A. BURNETT & CO.

DETROIT, March 9.—Fancy white comb scarce and higher and we now quote it 13@14c; No. 1, 12@13c; fancy dark and amber, 10@11c. There is considerable poor honey in the commission houses which is offered at 8@9c. Extracted, white, 6½@7c; dark, 5@6c. Beeswax, 25@26½c.

M. H. HUNT.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.

HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, March 15.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6¼@7c. Beeswax, 24@26c.

Present slim stocks admit of only a light jobbing business being transacted, with values much the same as previously noted. The coming crop is likely to be small. The bees are now being fed in a large portion of Southern California, and many are reported to have already died.

BOSTON, April 1.—Fancy white, 13c; A No. 1, 12@12½c; No. 1, 11@12c; No. 2, 9@10c; demand fair; no call for dark. Extracted, supply very light, good demand. White in 60-pound cans, 7½c; light amber in barrels, 7c. Beeswax, very light stock, good demand, 29c.

BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c.

PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BUFFALO, April 1.—Little or no strictly fancy one-pound comb honey here. It would sell well at about 11@12c. Few lots of common, dark, etc., arriving, and sell at 7@8c mostly; some very poor at 6c. There is no extracted here; worth from 4½@5½c; extra fancy, 6c. Fancy pure beeswax, 30@32c; poor, 25@28c.

BATTERSON & CO.

OMAHA, April 1.—Fancy white quotable at 13@13½c; choice, 12@12½c. Extracted, 6½c.

Quotations are practically nominal, as there is no stock left now in receivers hands, and dealers have also but very little left. There will not be a pound of any kind of honey carried over in this market. PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.

A. V. BISHOP & CO.

BEST

Basswood Honey

WANTED.

Write us how much you have, and in what shape, with your lowest price, delivered in Chicago. Address,

GEORGE W. YORK & CO.
118 Michigan St., Chicago, Ill.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,
94 Dearborn Street, CHICAGO.

Headquarters of the Eclectic System.
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☞ IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.
Please mention Bee Journal when writing.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing

22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co.....Watertown, Wis.
E. Kretchmer.....Red Oak, Iowa.
J. M. Jenkins.....Wetumpka, Ala.
Portland Seed Co.....Portland, Oregon.
E. T. Abbott,.....St. Joseph, Mo.
L. C. Woodman.....Grand Rapids, Mich.
J. Nysewander.....Des Moines Iowa
Inter-State Mfg. Co.....Hudson, Wis.
J. Nebel & Son .....High Hill, Mo.
G. W. Fassett.....Middlebury, Vt.
J. W. Bittenbender.....Knoxville, Iowa.
J. L. Gray .....St. Cloud, Minn.
Pierce Seed and Produce Co.....Pueblo, Colo.
F. Foulger & Sons.....Ogden, Utah.
R. H. Schmidt & Co. .....Sheboygan, Wis.

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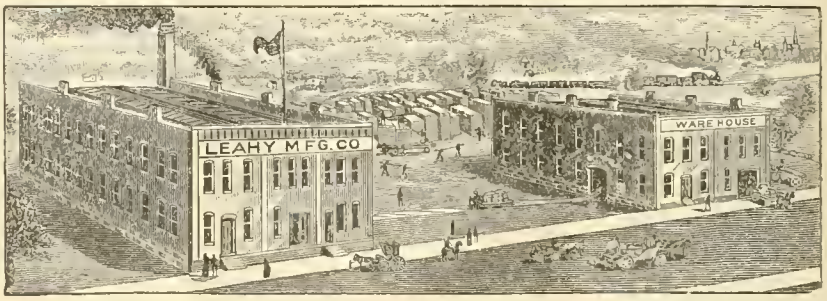

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CONVENTION PROCEEDINGS

Report of the Michigan State Convention.

BY W. Z. HUTCHINSON.

The Michigan State Bee-Keepers' Association met in annual convention Dec. 30 and 31, 1898, in Woodman's Hall, at Reed City. For several years this convention has not been a great success in point of numbers. When a man gets little or no honey, he has no money with which to attend conventions. This time the convention went into the heart of the willow-herb district, where the bee-keepers get honey, if any one does, and there was really quite a respectable crowd. Altho there was no set program, the proceedings were of interest and profitable. This plan was not adopted because any one thought that it possest any special merit, but because the secretary was too busy to get up the program. If there is the right kind of a president in the chair, as there happened to be this time, this plan is all right. Another thing, it is now three months since the convention met, and the secretary is now writing up the proceedings. I think that the Michigan convention better choose some other man for secretary—one who can give more time to the work.

But to return: Slips of paper were past around, and the members askt to write questions and pass them up to the president, who read them and selected one for discussion. When one topic was thoroly discust, another was taken up.

THE MATING OF QUEENS.

T. F. Bingham—Other things being equal, is an Italian queen more likely to mate with an Italian drone than with a black drone?

J. M. Rankin—We have been trying at the Agricultural College to breed for length of tongue in the bees, and, of course, we wisht the queens to mate with Italian drones, and we succeeded. I think that there is no difference as to the likelihood of a queen mating with a black drone or an Italian drone, that is, other things being equal.

Mr. Bingham—I have noticed that it is difficult to keep Italians pure. Three years ago my bees were all pure Italians, now they are mixt.

W. Z. Hutchinson—When I began bee-keeping I had black bees, and all of the bees in my neighborhood were black bees, with the exception of a few colonies of Italians that were a mile and a half from my place. It was a sort of a puzzle to me that one-half of my queens should mate with these distant drones, when there were so many black drones right in the yard. Later, I read the views of some of the leading bee-keepers that queens or drones, or both, had a disposition to fly far from home when mating. It seemed a provision of Nature to prevent in-and-in breeding. When I began rearing queens for sale I found that I must get rid of all black drones in my neighborhood, but it was not until I had Italianized all of the bees within about three miles of my apiary that I finally succeeded in getting all of the young queens purely mated. With all of the bees Italians within three miles there were *none* of the queens mismated, and there was no trouble in keeping my bees pure Italians. People say that Italians will "run out," and go back to the black blood, so to speak, but this isn't true. If an Italian apiary is surrounded by black bees nothing is more certain than that these Italians will eventually be superseded by hybrids. The same thing would occur if a man should start an apiary of blacks in a neighborhood filled with Italian bees. Mr. Aspinwall restrained the

A. C. Sanford—(*See page 250.*)

queens in their disposition to roam by cutting from 1/16 to ⅛ of an inch from each wing, and the result was that almost all of them were mated by Italian drones, while black bees were in the vicinity.

Mr. Rankin—I think that a caution ought to be given in regard to this clipping. At the college we clipt 62 queens, and only three or four of them were mated. One of those

that mated was clipt only the 32nd of an inch, and one was clipt as much as ¼ the length of the wing.

PLAIN SECTIONS AND FENCE SEPARATORS.

L. C. Woodman—I have used 100 cases of plain sections. The season was poor, but I cannot say very much either for or against them. The fences are expensive, and the bees glue them up considerably.

Mr. Powers—I have used both styles of sections. The sections of the plain style are better filled. The separators are just as easily cleaned.

H. G. Gifford—When plain sections are used we get heavier combs and less pop-holes, and there is a saving in shipping-cases.

H. S. Collingwood—I want plain sections, but not fence separators. I want slats on the separators, so that I can use plain sections, but I do not want any fence separators. Here he showed a fence separator in which most of the cracks were filled with propolis.

Mr. Bingham called attention to the fact that most of the openings were too narrow.

Mr. Hilton called attention to the fact that the separator had been used at the outside of the super where the bees could not get behind it, and that and the narrowness of the openings accounted for the great quantities of propolis that had been used. He said that the A. I. Root Co. acknowledged that some of the first fences that they sent out had too narrow spaces. The fear of "washboardy" had led them to make the spaces as narrow as they had. This fault has been remedied.

Mr. Bingham—There is no question that the use of plain sections allows of a saving in shipping-cases, but there are other considerations. Here is one: With tight or closed separators the bees will begin upon only a few sections in the center of the super, and if the flow is slow, or if it is near the close of the harvest, they will keep on and finish up those few sections that they have begun working upon, when, with no separators, they are more inclined to spread out and begin work upon a large number of sections, and perhaps not finish any of them. With tight separators there will be less unfinisht sections than with no separators, and it seems as if open separators might have a tendency in the way of encouraging the bees to spread out and begin work upon more sections than they can finish.

Mr. Hutchinson—I was over to the convention of the Ontario bee-keepers last December, and Mr. Jacob Alpaugh, who has had much experience in comb-honey production, took the same view as that advanced by Mr. Bingham, viz.: that separators have a tendency to keep the bees from spreading out and beginning more work than they will finish. That is, they seem to look upon each compartment between the separators as separate from the rest of the super, as independent in itself, and are more inclined to finish up work that is begun than to spread out and begin more work. In other words, tight separators seem to have a tendency to cause the bees to concentrate their efforts.

Mr. Bingham—Perhaps some of you may remember the Betsinger separator. It was made or coarse wire-cloth. The openings were large enough so that a bee could pass thru. If these openings had been too large I suppose that the bees would have made little warts upon the surface of the comb. The Roots have been very careful in this matter of plain sections and fence separators. They are working slowly as they did with the deep-cell foundation. They are not crowding these things. Fence separators may yet be thrown entirely out of the market.

Mr. Rankin—At the college we gave the plain sections and fence separators a trial. We filled one-half of a super with plain sections and fence separators, and the other half with old-style sections and old-style separators. The plain sections were better filled around the edges.

Mr. Bingham—When we see how easy it is for a firm like the Roots to make a mistake, we'd better be careful how we adopt anything about which there is even an opportunity for making a mistake.

NEEDED FOUL BROOD LEGISLATION.

The secretary read a paper from Mr. A. D. D. Wood, of Lansing, which went to show the difficulty of doing anything in the way of suppressing foul brood so long as there was no better law upon the subject. At the time the old law was past it was supposed that the only possible thing to do with a colony affected with foul brood was to burn it up. We have since learned that it is possible to save the bees, to disinfect and use the hive, to boil the honey and to melt the combs into wax, and to thus get rid of the disease with but little loss except the labor. The trouble is that many bee-keepers have only a few colonies, and are not specially interested in bees. They do not know anything about foul brood, and do not recognize it when it first appears, and would not know how to treat it if they *did* recognize it. It is neglected, and colonies become weak in numbers, are robbed, and the seeds of the disease are thus spread from colony to colony, and from apiary to apiary. There is scarcely a county in the Lower Peninsula that is free from this disease; and until there is someone who has the authority and skill to step in and help bee-keepers to crush it out, it will continue to spread. Over in Ontario this disease threatened to wipe out the industry of bee-keeping when an inspector of apiaries was appointed. He has now been at work several years, and the disease is fast disappearing from the Province. Wisconsin has followed in the steps of Canada, and now has a similar law and a most efficient inspector. Illinois and New York are also working to get a similar law. Colorado has a foul brood law. There is too much machinery about the old law. There is too much trouble to get it enforced. If it turns out that there is no foul brood where it was suspected, then the man who complained is shouldered with the expense of the examination. This fear of being called upon to bear the cost deters many from complaining that would otherwise make a complaint.

Mr. Rankin—This disease is certainly on the increase. In Sanilac county I found an entire apiary dead from foul brood.

Pres. Hilton—We need protection from foul brood. The old law was all right at one time, but now it is different. Many of you probably have never seen foul brood, and do not know what it is like, and I hope you never will. The brood dies and turns a dark brown, and it is stringy and ropy, and emits a disagreeable odor. Seeds of the disease get into the honey, and any of this honey carried to some other hive starts the disease there, and so it goes. Some of you may think that there is no foul brood near you, and that you will never need the law in your own personal case. This is something that you cannot be sure about. It may be nearer than you think. Even if it isn't the way to keep it away from you is to have it stampt out wherever it may be. If we as a body ask for this law, and show the legislature that it is really needed, it can be secured without a doubt.

Upon motion of Mr. Bingham, it was unanimously voted that Mr. Rankin be instructed to draft a bill similar to the Ontario or Wisconsin law, and secure its introduction to the Michigan legislature.

THE HEDDON HIVE AND MANAGEMENT.

D. R. Van Amburgh—With the Heddon hive I put on the sections when the bees are ready regardless of whether the hive is composed of one or of two cases. It is from the swarm that I get the honey. I give the supers to the swarm.

Mr. Hutchinson—My practice is the same as that of Mr. Van Amburgh. As soon as the bees are nicely at work in the first super, and it is half or two-thirds full of honey, that is, the sections have reacht that stage of completion, I raise up the super and put another underneath. I fill all sections full of foundation. When the bees have made a good start in the second super, and honey is coming in at a good rate, I raise both supers and put another underneath. It must be remembered that the force of bees in the hive is rapidly increasing at this time of the year, and it does not take long for enough to hatch out to fill a super. By the time that it is advisable to add another super, if that time comes, it is likely that the top super will be ready to come off. If the bees are a little slow in completing the corner sections I would not leave the super on for them to be completed, but take it off and take out the unfinisht sections in the corners. As soon as enough of these unfinisht sections have accumulated to fill a super I fill one and put it upon some colony. I would not tier up supers more than three high. If a colony is crowded for room, and has three supers, and the top one is not ready to come off, I would give it, bees and all, to some weaker colony. I have never had quarreling when I did this. In hiving a swarm, I hive it in two cases of the Heddon hive, with only starters in the frames. It is hived upon the old stand, and the old hive set by its side. The supers are transferred from the old hive to the swarm. In about three days, after the bees have quieted down and recovered from their swarming-fever, I remove the lower case. If hived in only one case there is danger of their absconding, but there is no danger after three days. On the seventh day the old hive is moved to a new location. This robs it of its surplus bees at the time when the young queens are hatching, and, as a rule, there is no after-swarm. If there *is* an after-swarm I usually go thru the hive and cut out the remaining queen-cells, and

hive it back again, when the trouble is over. Like Mr. Van Amburgh, I get my surplus from the swarm. This contraction of the brood-nest leaves a colony in a condition that is not strictly first-class for wintering. If there is a fall flow, an additional case can be given, and the bees will build up into a good colony. If the location is such that there is no fall flow, then I unite the swarms at the end of the main honey harvest. To do this I remove one-half the queens about two days before I wish to make the unions. The queenless colonies are carried and set up on the top of those having queens. Queenless bees are much more inclined to give up their location than is the case with those having a queen. There is also less danger of quarreling if the bees of one colony are queenless. This, in brief, is a sort of outline of my management with the Heddon hive.

Mr. Bingham—I would like to know how small a colony will winter well. I may say, however, that I think that colonies are more nearly of an average size in the fall than many of us imagine.

Mr. Hutchinson—I prefer a colony of ordinary strength, but the bees must be young bees. A large colony of old bees is not of much value compared with even a small one of young bees.

THE BUILDING OF A HONEY-HOUSE.

The question was askt, "What kind of a honey-house should be built for 100 colonies of bees?"

Mr. Hutchinson—My honey-house was for 100 colonies. It was only 8x10 feet in size. The sills were 2x4 inch oak scantling laid upon stones. The sides were of boards nailed to the sills and plates. It was battened. The boards were painted a dark red, and the battens white. It had a peakt roof, and there was a door in each end and, a window in each door and in each side. These windows allowed us to see if swarms were coming out. The windows slid to one side, and there was wirecloth over the windows on the outside. This wirecloth extended up above the windows, and was held out a little distance from the side of the building so that bees could crawl up and escape. This building answered very well as a honey-house, but we had another larger building near by that was used for a shop and storehouse. Our honey-house stood in the middle of the apiary.

H. S. Wheeler—I would like a larger house than that. I want one in which there is room to do some work, also to store from 4,000 to 6,000 pounds of honey. I would have the house at least as large as 15x16 feet.

Pres. Hilton—I agree with Mr. Wheeler. It costs but little more to build a large house than it does to build a small one. I would have it at least 12x16 feet.

Mr. Bingham—I would have a trap-door in the roof so arranged that it can be opened, and the opening closed with wirecloth. When extracting in hot weather the heat in the closed building is something that is almost overpowering. This door in the roof would allow the heat to pass off. I would have wirecloth over the windows, but inside the glass instead of outside of it. I would have my work-shop in a separate room from the honey-room. We often wish the honey-room closed, and it is not a comfortable place in which to work.

ADVISABILITY OF HAVING OUT-APIARIES.

The question was askt as to how an out-apiary should be managed in swarming-time.

Mr. Woodman—If I had it to do I should want a cheap hand to help me.

Mr. Bingham—I would keep a close watch at each apiary and see where the bees did the best, and take all of the bees to that place. I doubt if it pays, many times, to have out-apiaries. It increases the work wonderfully.

THE POSSIBILITIES OF THE WILLOW-HERB.

Mr. Wheeler told how quickly a colony had filled the combs of an upper story when willow-herb was in bloom.

Mr. Gifford—I once hived a swarm, and in seven days it swarmed again. I examined the hive and found the 10 combs full of honey, except a few patches of brood, and the two supers of sections were also full.

Mr. Bingham—I object to the publication of such stories. It induces men to go into the business only to be disappointed. In this instance they are probably true, but they are not representative yields. Michigan does not yield more than 15 pounds per colony on the average.

Pres. Hilton—For eight years I kept a careful account, and my average yield for the eight years was 75 pounds per colony.

Mr. Bingham—Yes, but that was when the woods were full of honey. It was when Mr. Root got the cistern full.

Pres. Hilton—I presume that Mr. Bingham is really correct in saying that the average yield for the whole State of Michigan is not more than 15 pounds per colony, but in this region 50 pounds per colony is a fair average, and I can afford to hire a man to care for my bees and pay him good wages, and make money out of the business. It must be remembered that bees cannot be neglected if we are to get good yields.

Mr. Van Amburgh—I have taken as much as 50 pounds a colony in a little basswood flow; but I have had basswood harvests in which I got only five pounds.

LAYING WORKERS, HOW TO DETECT THEIR PRESENCE, AND HOW TO GET RID OF THEM.

In reply to a question as to how the presence of a laying worker could be detected, Mr. Hutchinson said:

"It can be detected by a large number of eggs being deposited in one cell. The eggs are seldom in the bottom of the cell. Perhaps the worker cannot reach to the bottom of the cell. They are always on one side, and near the bottom. When the eggs hatch all of the larvæ soon die except one, and when the cells are capt over they have a conical or raised capping the same as the capping over drone-brood. It is very seldom that a laying worker is seen. Once or twice I have seen a worker laying eggs, or at least it *lookt* as if she was laying. I caught and killed her, but it did not stop the laying of workers. I presume that there is more than one in a colony."

Mr. Bingham—The bees act uneasy. Thump on the hive, and they will keep up a humming for a long time. Thump on a hive containing a colony with a queen, and the bees will make a short hum, or buzz, and then stop.

Mr. Hutchinson—The quickest and easiest way of getting rid of a laying worker is to unite the colony with some other colony having a laying queen. Or the colony with a laying worker may be moved away and a nucleus with a queen set in its place. The workers will return to their old home and join the nucleus. When most of the bees have joined the nucleus the rest of them may be shaken down in front of the nucleus, and all will be well.

PREVENTION OF BUR-COMBS.

Mr. Rankin—We have tried various frames, and the Hoffman frame with top-bars 1⅛ wide and ⅞ deep, spaced ¼ inch apart, gives us the least bur-combs.

Pres. Hilton—My experience is the same. With this frame I see no need of a honey-board. Such a top-bar also has a tendency to keep the queen out of the supers.

PLACE OF MEETING AND ELECTION OF OFFICERS.

Thompsonville was selected as the next place of meeting, and the following officers chosen: President, Geo. E. Hilton; vice-president, H. Gifford; secretary, W. Z. Hutchinson; and treasurer, J. M. Rankin.

W. Z. HUTCHINSON, *Sec.*

Purity of Drones from a Mismated Mother.

BY G. M. DOOLITTLE.

THE following was referred to me to answer in the American Bee Journal. I don't know why, for I do not profess to be informed on such matters, as do some of our more scientific brethren in apiculture. But I will try to throw what light I can on the subject from a practical standpoint. Here is the subject referred to:

EDITOR YORK:—The Scientific American supplement No. 1207 contains an article on the honey-bee, reprinted from a pampblet issued by the United States Department of Agriculture as Bulletin No. 1, Division of Entomology. The article closes thus:

"The fact that drones develop from unfertilized eggs is to be noted as having an important practical bearing in connection with the introduction of new strains of a given race or of new races of bees into an apiary. From a single choice home-bred or imported mother, young queens of undoubted purity of blood may be reared for all of the colonies of the apiary, and since the mating of these young queens does not effect their drone progeny, thereafter only drones of the desired strain or race and pure in blood will be produced, rendering, therefore, the pure mating of future rearings fairly certain if other bees are not numerous within a mile or two. Eventually, also, all of the colonies will be changed to the new race, and without admixture of impure blood, provided always that

the young queens be reared from mothers of pure blood mated to drones of equal purity."

Now, I wish you would answer this thru the Bee Journal, or have a specialist in queen-rearing answer it, namely: Does experience teach that queens from a mother of undoubted purity of blood produce ONLY drones of the same purity as the old queen, no matter to what race the drone belonged which the young queen met on her wedding flight? That is, does a pure Italian queen, mated to a Carniolan drone, produce hybrid workers, but PURELY Italian drones?

I have often heard that the color of the drones of any colony would show the purity or impurity of blood more certain than the color of the workers, which is contradictory to the above.

AUGUST F. KOCH, PH.G.

In the first place I object to the term "purity" as often applied to the Italian bee, and as spoken of by the writer of the above. Nearly 30 years of experience with the Italian bee has thoroly convinced me that it is not a *pure race* of bees, but only what would be called "thorobred." If such is the case, which I shall soon try to prove, then all talk about keeping an apiary of such bees pure is only a case of reasoning upon a false base or beginning, to start from. When it comes to breeding the Italian bee "to the feather," as it is termed by poultry-men, such bees are "not in it," and never have been, for the queens vary all the way from being as dark as a pure-blood German queen to one whose abdomen is of a rich orange color the whole length, even to its extreme tip, on the best specimens; while the drones and workers vary nearly as much, altho no worker-bee has ever been reared whose extreme tip was of an orange color.

Now if the queens coming from Italy, or "imported stock" as they are usually termed, produce workers with only three dark or leather-colored bands upon their abdomen, and drones which the ordinary observer would pronounce only as black drones, while their young queens vary all the way from black to those being ring-streakt, speckled and spotted, the same as being called *pure* Italians, how comes it about that any careful breeder can take these bees and by selection soon come into possession of bees so yellow that there is no sign of black on the queen, very little on the drones, and only a very little of dark or black on the extreme tip of the workers? Is it not self-evident to any unprejudiced mind, that there can be no establisht purity in the *imported* mother from which we started?

Take a black or German queen in her purity and try the same linè of breeding for a whole century, with none but drones from a German queen, and you will have only common black or German queens, workers and drones at the end of the 100 years. So if we are to start from the purity side for any experiment as to whether the drones are affected by the young queen meeting the drone of a different "blood," we must start with the German queen, or something we know came from a *pure* race of bees.

Then there is another point I wish to call attention to, which is, where the statement is made that success can be attained along this line of pure mating of queens, "if other bees are not numerous within a mile or two." Herein lies one of the weak points in "breeding for purity," which is very fallacious, and, strange to say, this fallacious part is more often put before the public than the real truth.

All careful observers know that a distance of at least five miles must intervene between the race of bees we would desire to keep pure and that of any *single* colony of another race, else all our breeding for purity is of no avail. Yea, and were I to say just what I thought I should say that the distance should be at least *seven* miles, from the experience I have had since I came into possession of my out-apiary. When I bought this out-apiary it was composed of nearly all black bees, tho some of the queens had evidently mated with drones from dark Italian stock, that being the kind of Italians chiefly kept where other but black bees were used, up to this time. At about the time I came into possession of this out-apiary, I became interested in what is termed the "five-banded" or golden Italians, those bred in this country from the dark imported stock, as before mentioned, till they were as yellow as gold.

Having beome interested in these yellow bees I kept down drones from the dark Italians and allowed much drone-comb, consequently many drones of the yellow variety to come forth, and the result is, that, altho this out-apiary is fully five miles distant from my home yard, fully one queen out of six at the out-apiary shows by her progeny that she mated one of the yellow drones.

No, no, friends, there is no such thing as pure mating of queens where apiaries of different races are located "within a mile or two" of each other, and he who thus breeds, expecting to reap any certain results, is destined to an uncertainty of affairs which is not pleasant to contemplate.

All familiar with the flight of drones know that they have places where they congregate by the thousands, if not millions, coming to these places from all over a region from five to seven miles around, and when the queen comes to these congregating places she is as apt to meet a drone from a "scurf" breed as she is one of those choice, nice, yellow "gentlemen" you would have her secure as her partner.

Late in the fall, or in early spring, drones nor queens fly so far, consequently we are more sure of pure [?] mating with Italian bees than at other times of the working season. For this reason I select combs of drone-brood from my choicest colonies, near the close of the honey season, and mass this drone-brood in a colony kept queenless and fed bountifully, so that these drones are kept after other drones are killed off in the fall, when they are "hand-pickt," so that only the best remain when young queens are reared, and a satisfactory result obtained.

And now to the real question which it is desired should be answered. There can be no question but what the *drone is the* SON *of his mother*, for all queens can lay eggs which will perfect drones, even tho they *never meet a drone*, or become capable of laying worker-eggs. From this standpoint it is easy to say, that "as is the mother so will the son be," and this is what the scientists have claimed thru all the past. But there are those who claim that the *son* of the mother of a pure black queen, mated to a yellow drone, is not the same son, to all intents and purposes, that he would have been had this queen never met a drone at all, or had she met a drone of her own race; and I believe this last to be correct, when we come down to the very fine points of "breeding to a spot or feather."

I am fully persuaded that a succession of breeding along this line will result in a mongrel race, thru the contamination of the queen in mating; but the process will be so slow that, when practically applied, the writer from the agricultural department of the United States is very nearly or quite right. I presume the writer of the reference given was none other than Frank Benton, a man whose opinion, along these lines, is fully equal in value to that of any other in the world.

Onondaga Co., N. Y.

Rheumatism Cured by Bee-Stings.

BY ELD. DANIEL WHITMER.

IN the forepart of June, 1898, I called on Editor York, and in our conversation I remarkt that I had not reported my work with the bees for a number of years, tho having manipulated them for about 20 years, and having been a constant reader of the American Bee Journal for that time. He replied that I ought to let my light shine. Therefore, remembering the best of all books giving the intelligence that if the light that is in thee be darkness, how great is that darkness, here goes.

First, then, I call the attention of the bee-keeping fraternity to the dreaded and unenjoyable rheumatism which afflicts and affects so many persons who so much desire a remedy giving relief and effecting a radical cure to the sufferer. I believe that bee-poison, with some people, is a good remedy; it has proved itself a bonanza and antidote to the writer for many years.

Prior to my entering the bee-industry, I had been a victim of the disease in its different forms, attacking the limbs and other portions of the body. Finally, by overwork in manual labor, I was attackt with sciatic rheumatism, resulting in paralysis of the back, thighs, kidneys, bladder, etc., and was under the doctor's care and confined to my bed and room for three months.

Under the doctor's treatment I became convalescent, but unable to perform manual labor on the farm. As yet the great numbness in my limbs was so present that in my invalid condition I chose apiculture as a pursuit to give me a livelihood.

One day in handling a colony of bees I became somewhat careless in the manipulation, and irritated the bees to the extent that they rusht out of the hive and stung me desperately on the most numb parts. If I had no feeling before, it was evident I had then, for I just danced as I never did before, for I don't believe in it.

In 24 hours I was a well man, so far as rheumatism was concerned, numbness all gone. I am liable to get it in the fall and winter. It has returned three times in 20 years, and subsided every time when I got out with my bees in the spring.

I reported my cure to my physician, giving the remedy that did it. He stood before me staring and with amazement, and said that the poison of the bee-sting would have that effect. So at the next medical institute, at Chicago, he

reported my case and cure to the medical faculty, after which I had calls for bees that the poison could or might be extracted in alcohol to be given internally as a remedy for rheumatism.

My general health has improved during all these years.

St. Joseph Co., Ind.

Feeding Sugar Syrup to Fill the Brood-Combs Prior to the Main Honey Harvest.

BY W. W. M'NEAL.

I CANNOT but think it a mistake on the part of anyone who resorts to the use of sugar syrup in the manner spoken of to secure a crop of honey. The feeding of it to stimulate the queen to increast activity, thereby getting the combs filled with brood instead of syrup is certainly a more practical method and less questionable. Feeding bees is a fussy, unpleasant work at best; when the word is spoken and the act performed, the story will reverberate up and down the valley and adjacent hills till they who eat honey decide to buy it of some one else. If the colony is allowed an abundance of good, ripe honey the fall previous, or given a sufficiency at one feeding in the spring of the year, they will usually be found able to take care of their share of the honey crop when it comes.

To feed bees sugar syrup and get it stored in the brood-combs in the manner they store when gathering from the flowers, is something every one cannot do, or will not take the time to do. If only a little is fed for a goodly number of days, surely none of it can be stored for future use unless the bees are gathering from other sources enough to meet their needs, and if they are given syrup in quantities to enable them to do this, it will most certainly be done at the expense of brood or numerical strength.

When the honey harvest arrives the result most likely will be one of two things; The queen, if she be one or two years old, will issue with a swarm; if she be of the current season's rearing, the bees will clear the brood-combs for her of the syrup, and carry it into the supers. If they never do this, why is it that a swarm having a young fertile queen and hived on drawn combs during a good honey-flow continues to work right along in the sections for sometime after the flow has ceast? Will those who insist that bees do not carry above a portion of the syrup when the brood-combs are crowded at the opening of the harvest consent to feed a dark grade of extracted honey prior to the coming of the *white* honey? The addition of sugar syrup to well-ripened clover or basswood honey does not improve the quality or color, be it done by the bees or the apiarist. The darker grades and thin, watery, unripe honey may be made better; but to sell it under the name of *honey*—well, say, my esteemed bee-keeping friend, wouldn't *you* feel just a little bit wronged if some one to whom you had paid the price of best pure honey would deliver instead an article composed of sugar syrup and honey, and the whole labeled "honey?"

Bee-keepers should not be too loud in their condemnation of glucose when their own houses of stone are composed so largely of glass. I feel that no one can be more bitterly opposed to the use of glucose with honey than myself. Such adulteration cannot be other than a voluntary effort to deceive for the sake of gain. But to ignore such wholesome proof as the bees produce, that the syrup or honey of the brood-combs *is* oftimes carried into the supers—a portion of it, I mean—and there stored in the comb along with the honey being gathered from the field, is a moral slackness which gentlemen of the brotherhood should be very careful of.

O haste the time when there will be made known some simple, reliable means of detecting the presence of glucose or cane sugar in honey! Then our patrons may read from the label on can or bucket the surety of the genuineness of its contents.

I am prone to believe, owing to the largely varying flavor of pure honeys, that adulteration is not nearly so prevalent as the belief thereof. But a world of suspicion on the one hand, and a company on the other practicing the adulteration of honey, and no ready means to convince a quizical customer that the honey one is selling is, beyond peradventure, strictly pure, has changed the selling of honey in many places from a pleasant to an unpleasant one.

When honey is bought in a distant market to hold one's trade, great care and judgment should be exercised in selecting and in the handling, if the apiary be close to where the honey is kept. Honey that differs widely in flavor from what people are accustomed to buy will generally find poor sale; but it may be a fruitful source of foul brood contagion, and so prove to be a pretty expensive way of holding the trade in honey. Alfalfa extracted honey is certainly pleasing enough in body and flavor to suit the most exacting purchaser; but even this I would not feed to my own bees without first diluting with water and boiling thoroly.

With proper precaution I believe it to be to one's interest to buy when his own crop is short. As well as I like the taste of alfalfa honey the daintiest little mouthful distresses me as if it were poison pure and simple to my stomach. I have eaten of a good many kinds of honey, but none save the alfalfa ever hurt me. I have sold it quite largely with the best of satisfaction to all parties concerned, and know of but one other case who, like myself, was made sick from eating it.

A good article of extracted honey, to my notion, is better than the same in the comb, and I fully believe that honey in this form will be the only way it can be produced at a profit in the near future.

The sooner bee-keepers cease to stir up further opposition by the injudicious feeding of sugar syrup the better it will be for the pursuit.

Scioto Co., Ohio.

Law and Honey Prices—A Reply to Mr. Doolittle.

BY EMERSON TAYLOR ABBOTT.

THERE is a certain animal which is said to become very much excited at the appearance of a red rag, and some of my remarks seem to have had a like effect on Mr. Doolittle (see page 195), yet, for the life of me, I cannot tell why. There seems to be no reason why he should lash himself into such righteous indignation, unless he has lookt at the dark side of things so long that his vision of the crown and glory of life, health and happiness, has become a little blurred.

Mr. Doolittle, this is not a radically bad world, and "God is not dead," even tho they did feed our soldiers on bad meat, and just now we are engaged in an inglorious effort to kill off a lot of half-civilized Filipinos. It is true, however, that some men are a good deal richer than an exercise of common honesty would seem to warrant, but I see no advantage in becoming greatly excited about it.

I have very positive views on the subject which Mr. Doolittle touches, but I am thoroly confident that the American Bee Journal is not the place to discuss them. I think I can see these things just as "clearly" as Mr. D., but perhaps they may not look the same to me as they do to him. Let that be as it may, I want to set myself right, for I am convinced that the two articles referred to, taken as a whole, do not teach what Mr. D. tries to write into them. Perhaps I did not express myself clearly, but what I wanted to say, in the pure food talk, was that no law should be past *with a view* to *raising* or *lowering* the *price* of any product. Especially should no law be past *because* it will enable a certain class of people to get *more* for *their products*. This is not what law is for, but to promote the *common good*. Briefly, to illustrate, I do not believe we have any right to pass a law against the adulteration of honey *because* it will *raise the price of honey*, but because it is a *fraud to adulterate*, and all frauds should be suppresst.

Bless your soul, Mr. Doolittle, I had no idea of discussing what effect laws *do* have on the price of things when I said, "Law has nothing to do with increasing the price of the produce of any individual;" and I still insist that this is not the province of law, but rather to guarantee unto every man "Life, liberty, and the pursuit of happiness." Perhaps it would have been better if I had said, "Law should have," etc.

I want to enter a mild protest against Mr. D.'s repeated assertions that evidently Mr. Abbott believes so and so, for I am quite sure he does not know what I do believe on these subjects. I have never discust them in any bee-paper, nor do I intend to do so. There is not much occasion just now to discuss low prices of anything in this locality, especially the price of comb honey, for there is very little to be had, and I could sell a great deal of it at remunerative prices, if I only knew where to get it. Wonder which it was, *law* or *politics* that brought about this state of things!

Let me say, in conclusion, that I honestly believe that the adulteration fraud is the gigantic crime of the century, and a disposition to wink at it shows a lack of moral sentiment which should startle into activity the most sluggish and indifferent citizen of a free country. Adulteration ignores the foundation principles of all moral sentiment, and undermines two of the recognized basic ideas of legiti-

mate trade and commerce, namely, that a contract is the agreement of two minds as touching one thing; and that every man who has come into the lawful possession of any article has a right to fix the price at which he will part with it. If he makes the price so many pounds of *honey*, and you give him half the amount in *glucose*, you *defraud* him just that much, and every man who does it is a *criminal*, and, as such, should be punisht severely. If this *raises* the price of honey, all right; if it *lowers* it, all right; but let us be honest, "tho the heavens fall." No, Mr. Doolittle, your "pet hobby" is not of more importance than this. Nothing can be. Buchanan Co., Mo.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Farm-Stock Damage an Apiary.

I have 156 colonies of bees. We have a man here that is against bee-keeping; he believes in spraying when in blossom. There was a law past last winter that stops him on that, but he pastures 50 head of stock on the byways, which have been in my apiary and damaged the bees to a great extent, turning two hives over, pushing several from the stands. The disturbance is bad, the bees fill up with honey in cold weather, and can't fly. NEW YORK.

ANSWER.—I don't suppose there's anything different about the case from a case of damage in which there were no bees in the case. The probability is that your laws are such that one is not allowed to let his stock run in the road, and is responsible for damage done by them if they are allowed to run at large. In that case you would sue before the proper officer, probably a justice of the peace, the same as in any damage suit. If there is any special difficulty in the case, you can count on help from the United States Bee-Keepers' Association, providing you were a member before getting into trouble. If you are at present a member you are one of the wise ones, for some put off securing membership until they get into trouble, and then it's too late. Besides that, every bee-keeper should be willing to pay his dollar a year to help put down adulteration. A dollar spent in that way may put several dollars in his pocket in increast price of honey.

Grapevines for Shading Hives—Frames of Granulated Honey.

1. Are grapes good for bees?

2. I am thinking of putting a grapevine at every other hive for a shade, and also for the fruit. What is your opinion of it?

3. Would the grapes make a good shade?

4. I have about 150 or 200 brood-frames with granulated honey in them. Is there any way to get them out, besides tearing up the combs? They were taken off last fall. KENTUCKY.

ANSWERS.—1. At different times my bees have workt on grapes after birds have pickt holes in the grapes, and I don't know that any harm came from it.

2 and 3.—So far as fruit is concerned, grapes will do very well planted in an apiary. For shade a grapevine is not so very satisfactory, unless you have a trellis overhead, which is expensive.

4. Don't think of destroying the combs. Spray them with water and put in the hives for the bees to clean up, spraying again as often as needed.

Bees That Have Foul Brood.

In preparing my bees for winter last season I found, to my great surprise, that 2 colonies of the 12 were entirely destroyed by foul brood, and that every other one showed traces of the same disease. I would have found it out before, but the only time I have to work with them is on Saturday afternoon of every month, as all the remainder of my time is taken up with work and study.

Is it possible to cure the remainder, and how? is what I would like to know. I should like to know what books or pamphlets contain the most information on that subject, as I would like to make a thoro study of it, and might bring some of my knowledge to assist in getting an easy cure for it.

As assistant engineer of a large ice-machine manufacturing establishment, I thought that maybe a little chilly air supplied to them might affect a cure, as we have an abundance of it at our disposal from 0 to 40 degrees, Fahr., below.

For the past few years I have derived much pleasure in handling my bees, and only regret that I haven't more time to give them, but I should feel very sorry to be obliged to destroy them all, as I have purchast all the queens from different apiaries, and find pleasure in trying to keep some from swarming, making some work, and supplying upper stories to others that seem to turn mud to honey, they gather it so fast. Of all the queens I ever had I got one from the South that beats anything I ever saw swarming, and the swarms manage to get in the highest branches of the trees, and afford the entire neighborhood amusement watching us get them down and hiving them.

All my hives are of Root's latest and in summer are entirely covered by caladians and cannas, which makes it difficult to handle them, but they set off the apiary beautifully, which is nothing more than a large flower-garden. OHIO.

ANSWER.—Send 25 cents to the publishers of this paper and get Dr. Howard's pamphlet on foul brood, and you will have the best thing in the language.

I've never yet heard of foul brood spores being injured by cold. It's the extreme of temperature at the other end that's hard on them. But I'm not sure whether a continued application of 40 degrees below zero has ever been faithfully tried.

Letting Bees Fly After Shipping.

When a colony of bees has been shipt a distance, and confined for several days, is it best to open the hive and allow them a flight upon arrival? Or, let them get quieted down first, and open the hive say in the evening? IOWA.

ANSWER.—I don't know of any reason why it is not better to let them out as soon as possible.

Wood Foundation-Splints Instead of Wiring.

1. Why will not wiring brood-frames do just as well as to muss with the sticks you use?

2. Would not the Van Deusen wired foundation be just the thing if it is put in the new grooved top-bar, and let the wires run up and down in the frame?

3. Had you tried wire in any form before you finally decided on the sticks?

4. Are there any other advantages over the wires, by using sticks, than the prevention of sagging or stretching?

5. It seems to me your sticks don't prevent the comb from breaking loose from the top-bar in moving bees. S. DAKOTA.

ANSWERS.—1. It is no more trouble to muss with the sticks than to muss with the wire, and I have never been able to get as good combs with wire as with sticks.

2. Good combs might be secured thereby.

3. I have had wired frames in use by the thousand for many years—began using them from the first that wiring was made known; have perhaps 2,500 such frames now; have tried wiring horizontally, vertically, diagonally, and mixt, in fact in perhaps all ways recommended and some not recommended. Yes, I've tried wiring.

4. I have never been able with wires to have perfect combs built completely to the bottom-bar, and I have such combs with the sticks.

5. When a comb fills a frame completely from top to bottom, did you ever hear of its breaking away from the top-bar in moving? Probably the most popular form of wiring now is the horizontal. Do you think a horizontal wire that is half an inch or more below the top-bar will do more to prevent breaking from the top-bar than five sticks that are $\frac{1}{8}$-inch or less from the top-bar?

Please remember that I don't insist that any one else shall use foundation-splints. I only say that so far as I have tried them I like them very much, and have just ordered 4,000 more.

Brood-Frames and Their Spacing.

There has appeared in the American Bee Journal a description of the brood-frames used in your hives. I have had several years' experience with different styles of frames, and have decided that your idea of a brood-frame is about right. Kindly give the dimensions of your frames, and who manufactures them.

What size nails do you use in spacing (brad or flat head), and how far from the end of the top-bar, and how far down on the side piece, are they driven? CITY.

ANSWER.—Top-bar, 18⅝x1⅜x⅞. At each end is cut out ⅞x9-16, leaving the end 5-16 thick. A saw-kerf to receive foundation runs lengthwise along the underside of top-bar, 5-32 wide and ¼-inch deep. End-bar, 8 9-16x1⅜x⅜. The top-bar is in two parts, each 17⅝x1⅜x¼. Only one of these pieces is nailed on when the frame is made, the other being nailed on after foundation is in place. The sheet of foundation is 16⅞x8½. No wiring is used, the foundation being supported by five vertical basswood splints, 7⅞x-1-16x1-16. These splints are boiled in beeswax and prest into the foundation while warm.

For spacers to hold the frames at the proper distance from each other, common wire nails are used 1¼ inches long with flat heads 3-16 inches across. A gauge is used in driving in these nails so that the head shall project ¼-inch above the surface. Two nails are on one side at one end, and two nails on the other side at the other end. The nail in the top-bar is about 1¼ inches from the extreme end, and 7-16 from the top. The other nail is driveu in the

end-bar about 2⅛ inches from the bottom. Hold the frame up before you as it hangs in the hive, and on the side next you the two nails will be at the left, while at the right they will be on the side opposite. To hold the frame in proper place endwise, small staples are used about the same as window-blind staples. The staple is driven into the end-bar close under the top-bar.

It is only right to say that I'm not sure whether the width of these top-bars, 1⅛, with a space of ¼-inch between them, is the very best. The bees build more brace-combs between the top-bars than are desirable.

Some of my frames were made by the A. I. Root Co., and some by the G. B. Lewis Co. I think neither of them make such frames, only to order.

Moldy Combs—Putting on Supers.

My Italian bees in 8-frame dovetailed hives have wintered well considering the cold weather we had here, being 20 degrees below zero, and one spell was 30 degrees. If I had not had my bees packt in winter-cases I would not have had a bee now. But the combs which contain the honey toward the back part of the hive are moldy and very damp. I saw water dropping off of them and lying on the bottom-board, and water standing in the empty cells at the bottom of the comb. They have lots of honey yet. What is the cause of the above conditions of mold and the combs sweating so? And is there anything I should do, or shall I let them go? Will they come out all right themselves?

The combs at the entrance of the hives are dry, and not moldy. The bees seem to be flying finely, and are very vigorous, trying their best to rob a colony of black bees.

2. They have four brood-frames about full of honey, and the other four about half full. Should I put on a super by the middle of April? WEST VIRGINIA.

ANSWERS.—1. Probably the entrances were hardly open enough for sufficient ventilation. The parts farthest from the entrance would suffer most, the moisture settling there. The bees will probably correct the trouble of their own accord.

2. It is hardly wise to put on supers till a harvest comes from which they can store, but if you find the queen is crowded for want of room in which to lay, take out a full comb of honey and replace with an empty comb.

Taking Care of Combs of Honey.

I have six hives that the bees froze in. I cleaned the bees out, but the hives are full of honey. I want to keep them, as I have made arrangements with a neighbor for swarms to put into them. What will be the best way to do, to keep the moths out till used? Bees did very poorly here; 90 percent of those not stored are dead. IOWA.

ANSWER.—A cool, dry cellar is a pretty good place, as in such a place the worms will make very slow headway. If such a place is not at hand, they may be kept above ground, being spaced well apart, where moths and bees cannot reach them. Look at them from time to time, and pick out with a wire-nail any worms that get a start. They may be brimstoned, but it takes very heavy brimstoning to affect worms in brood-combs. Probably the very best way is to put a hive full of combs under a hive containing a strong colony.

The Bee-Keepers' Association—Enameled Cloth.

1. Where can I obtain the proper information in regard to joining the Bee-Keepers' Association?

2. Is it necessary to scrape the caps clean, providing they were used the year before?

3. Do you advise the use of enameled cloth over the brood-frames? NEW YORK.

ANSWERS.—1. Right here. You probably mean the United States Bee-Keepers' Association. Send a dollar to the General Manager, Hon. Eugene Secor, Forest City, Iowa, and tell him you want to join the Association. Or, send to the Secretary, Dr. A. B. Mason, 3512 Monroe Street, Toledo, Ohio, or to the editor of this paper. You can hardly do a wiser thing than to become a member at once.

2. If you mean hive-covers, I should say it was not necessary.

3. That depends somewhat on how the hives are made. If the covers come within ¼-inch of the top-bars, nothing of the kind is needed. If the covers don't fit down so close, then something in the line of sheets or quilts is needed. Perhaps, however, heavy sheeting is better than enameled cloth.

A Quintet of Questions.

1. I use shallow Hoffman frames (5⅜ deep) for extracting. Would you advise me to get a Cowan extractor with baskets large enough to hold two of these frames in each basket? How would the No. 17 two-frame Cowan do?

2. Is it necessary or advisable to use a dummy or follower in the extracting-super when using Hoffman frames, as above described?

3. In hiving a swarm, which is the better plan (a) to have all the frames filled with foundation, (b) partly foundation and part drawn-out combs, (c) or partly foundation and part ½ or 1 inch starters alternately placed in the hive? Authorities seem to differ on these points.

4. Which is the best foundation to use in shallow frames, medium brood, light brood, or thin super? Should I use full sheets or starters? Will it be necessary or advisable to wire shallow frames 5⅜ deep?

5. I can get good, strong colonies of Italian bees at $7.00 or $8.00 each; 1st swarms, at $3.00 each; 2nd swarms, at $1.50 each. Which would be the cheapest to buy considering the fact that increase of colonies is most desired? The full colonies would be in their own hives. For the swarms I would have to provide hives, frames, etc., buying bees only. IOWA.

ANSWERS.—1. I don't know, and I'd be obliged if some one who has had experience with such shallow frames would answer. I should think the No. 17 you mention would work all right if it doesn't take too careful work to get the two combs in the same basket.

2. It is advisable to use a dummy with any kind of a self-spacing frame. Otherwise you can't easily get out the first frame.

3. You are right in saying authorities differ, so you can't expect me to do more than to give my own preference, which would be, first, full combs; second, full sheets of foundation. If I had to use part starters, I'd use them by themselves, and not alternately.

4. Light brood with one horizontal wire will probably work all right.

5. That's a hard one. If you'll tell how much the old colonies will swarm, it will be easier to answer; also what time you can get the first and second swarms. If they come early enough, I'd risk the second swarms. Take an average season, and perhaps the first swarms will be best.

Sections with Starters Left Over.

I have been watching the Bee Journal for some time to see if I could use my pound sections that were in the supers last year with the starters in, or whether I have to throw them all away. I have about 1,700 of them that are not drawn at all, but are just as when put in the sections last year. NEW YORK.

ANSWER.—By all means use all the sections you have left over that are nice and clean.

"Adel" Bees—Zinc for Solar Extractor.

1. On page 150, New Jersey asks, "What are yellow-banded Adel bees?" You say you never saw any of them? Aren't you mistaken? Frank Benton says, "*Select* queens of any well-establisht race or variety may properly be called Adel queens." See Vol. XXXIV, No. 25, American Bee Journal, page 783.

2. Would a sheet of zinc be suitable for making a solar wax-extractor? WISCONSIN.

ANSWERS.—1. The word "adel" is a German word meaning "nobility." Mr. Benton is right in saying that such a word might have been applied in a general sense to any strain of bees of good quality, just as any good strain of bees might be called "honey-getters." But if you should develop a particular strain of bees and call them "honey-getters," bee-keepers would be likely to respect that title as belonging to your strain of bees, especially if you used the name in some foreign language. So when Mr. Alley uses that name for a particular strain, I see no reason why his title to that name should not be respected. Instead of being a strain of Italians, Mr. Alley says they are from Carniolans. In a late letter he says: "Don't you remember what F. Benton said in Gleanings about the two kinds of bees in Carniola? Well, he said this: 'I never yet saw an apiary in Carniola that contained *all* steel-gray bees; many of the bees are yellow-banded.' The Ad'l bees I have were bred up from the yellow strain. Ad'l means, or rather signifies, superior, and as the natives consider the yellow bees superior to the dark bees, they call them Ad'l bees."

2. I'm not sure just how you would mean to use the zinc, but I see no reason why sheet-zinc might not be used for any part of a solar wax-extractor except the glass part. Very likely you mean the perforated part, and for that it ought to work all right.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premium offered on page 254 is well worth working for. Look at it.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Don't Neglect Your Bees.—Winter losses have been severe, and there will be a tendency in the minds of some to be discouraged. But the wise bee-keeper will redouble his energies to take the very best of care of colonies that remain, treasuring as gold empty combs that are left. With the latter he can rapidly build up again, and there is no reason to believe that a good harvest may not be at hand, with fair prices.

The "Association" and the "Union."—A few weeks ago the matter of uniting the National Bee-Keepers' Union and the United States Bee-Keepers' Association was again brought up after a rest of about two years. We notice in a recent issue of the Modern Farmer and Busy Bee, Editor E. T. Abbott had this to say:

"There is an earnest effort being made to unite the United States Bee-Keepers' Association and the National Bee-Keepers' Union, as the aim and purpose of the two societies are the same. However, the matter seems to have reacht a point where no further progress can be made until there is some radical change in the management of the National. General Manager Newman, of the National, in a letter to General Manager Secor, of the United States Association, makes such demands as a condition of the union as are never likely to be assented to by the general manager and directors of the United States Bee-Keepers' Association, and there the matter rests. The writer will say for himself, as a director of the last named society, that the union will never take place by his consent on the conditions set forth by General Manager Newman. The new society has a work to do, and under the circumstances the best thing it can do is to go on and do it without any ill-will toward any other similar organization. Perhaps the time may come at some future day when the desired union can be brought about without any friction."

Of course, if there is to be a union of the two societies the initiatory steps must be taken by the National Bee-Keepers' Union. We were given to understand that its members would like to see a consolidation take place, else we would not have mentioned the subject again in these columns. We presume if five or six of the Union's members should request that a vote be taken at once upon the subject, such vote would have to follow.

But we are not advising at all. As we said in a previous editorial on this matter, the door is open for the Union to come into the Association whenever it decides to cast in its lot.

Nomenclature in Apiculture seems to be somewhat changeable, and, like so many other things in bee-keeping, varies with "locality." For example, in England "plumping" seems to be a term in common use, the meaning of which is hardly known in this country. Perhaps if this should fall under the eye of the esteemed Editor of the British Bee Journal he will tell us just what "plumping" means. Even no further away than Canada different terms are used. In the last number of the Canadian Bee Journal, page 518, occurs the expression, "take ten colonies of strong colonists;" and on page 521, "combs that had a light cap.....left the honey on cap." Will Editor Holtermann please give us the meaning, as there used, of "colonists," "light cap," and "on cap?"

New York's Foul Brood Law,—It seems that New York bee-keepers were more fortunate than those of Illinois, as we learn from the following that the New York legislature past the Foul Brood Bill:

The proposed Foul Brood Bill has become a law in New York. It is hoped that we shall be able to check the disease next summer. It was secured thru the efforts of the New York State Association of Bee-Keepers' Societies. Its success will depend upon the man who may be appointed inspector. HARRY S. HOWE.

We congratulate New York bee-keepers on their success. The House Appropriation Committee of the Illinois legislature approved $8,000 for destroying the San Jose scale, but refused to approve the expenditure of $700 for exterminating foul brood. They also voted $6,000 to the horticulturists, but not a cent for the bee-keepers. We hope soon to have the privilege of publishing the names of those who "turned down" the bee-keepers, so that when they come up again for election, voting bee-keepers may have a chance to "turn down" *them*. There was no good reason for ignoring the request of the bee-keepers, that the appropriation for the destruction of foul brood in this State be approved.

Apis Dorsata—An Explanation.—Dr. Miller sends us the following in regard to the way he was reported in the Chicago convention proceedings when discussing Apis dorsata:

MR. EDITOR:—On page 213 I am reported as saying with regard to Apis dorsata: "I am anxious that they should be brought here." Put in that unqualified way, that does not express my true sentiments. I am anxious they should be brought here if it is first known that they can be domesticated and kept under control. With my present light I am anxious they should be kept away. If they cannot be kept under control I can see no other result from bringing them here but to have them run wild and use up the nectar that our hive-bees should get. I have little fear as to that in the North, for I hardly believe they could

stand our Northern winters, but the result might be anything but desirous in the South.

It seems to me that it ought to be easier to domesticate them in their native region than to bring them here and domesticate them. Let the effort first be made where they are, and, if successful, Apis dorsata can be brought here; if the effort should be unsuccessful, Apis dorsata can remain in foreign lands, and this country be saved from another English-sparrow scourge. C. C. MILLER.

We agree exactly with Dr. Miller in the above—not because it is Dr. Miller who wrote it, but because we think his view in the matter is eminently sensible. It is always safer to be *sure* you are *right* before going ahead.

A Group of Canadian Bee-Keepers, to the number of 17, were taken in a photograph, and a full-page illustration therefrom graces the pages of the Canadian Bee Journal. They're a fine looking lot, making one wish for closer acquaintance.

Honey Advancing.—Gleanings says that *good* extracted honey is a scarce article, being 1½ to 2 cents higher than a year ago. A good article of comb honey could be bought a short time ago for 10 cents, and now "fancy" brings all the way from 12 to 14, and No. 1 from 10 to 13. There was one year, a good many years ago, when honey was so scarce that in spring it went up quite materially, but since then the rule has been that honey kept over till spring brought a lower price. There seems at present to be no question that *good* honey is a pretty scarce article, but it will not be so very long until the new crop from the South begins to come in.

Getting New Subscribers for the American Bee Journal ought to be easy work at this time of the year. The warm spring days will soon be here, when the bees will begin to hum again, and then their keepers will be interested in reading about them, and will want a good bee-paper. The Bee Journal, we believe, will just suit them.

From time to time we offer some excellent premiums to those of our regular readers who will go to the trouble of getting one or more new subscribers and send in the money. We hope that those who value the Bee Journal the most (our regular readers) will try to get their bee-keeping friends and neighbors to subscribe for it.

MR. FRED D. GIBBONS, of Orange Co., Ind., writing us April 5, said:

"The American Bee Journal gets better all the time. It is a welcome guest in our home."

* * * * *

THE FARM JOURNAL is 22 years old, prints 40 tons of paper a month, and is out of debt; it is cut to fit every progressive farmer and villager. Very well, see the offers on page 254. We will have the Farm Journal sent to your address for the balance of 1899 and all of 1901, 1902, 1903, and 1904—nearly five years—and it will get to you if alive anywhere on this planet.

* * * * *

R. L. TAYLOR criticised Dr. Miller for using the expression, "bring to a boil." The Doctor defends his usage by referring to the Standard Dictionary, the latest and by far the largest work of the kind ever printed. Mr. Taylor objects, saying no other dictionary makes any mention of "boil" as a noun in this sense (heating water). Dr. Miller is entirely right.—Stenog, in Gleanings.

A PATHETIC APPEAL.—The following poetical effusion won for its author, the Editor of the Rocky Mountain Celt, the prize of $1,000 for the best appeal poem to subscribers to pay up their subscription:

"Lives of poor men oft remind us honest men won't stand no chance. The more we work there grow behind us bigger patches on our pants, once new and glossy, now are strips of different hue, all because subscribers linger and don't pay us what is due. Then let us be up and doing; send in your mite, however small, or when the snow of winter strikes us we shall have no pants at all."

We do not republish the foregoing prosy-looking poetry because we fear being pantsless by another winter, but thought it might help to remind some of our readers that their subscriptions were not paid up. We hope that all who are in arrears will remit promptly, and thus help to keep up the financial end of the Bee Journal—the very important end of the business—the "business end," as is sometimes spoken of the bee.

* * * * *

MR. F. GREINER, of Ontario Co., N. Y., wrote us April 9, wishing to make the following correction:

EDITOR YORK:—In your synopsis of my article, "He or She," on page 216, the meaning of a certain phrase is rather misrepresented. I do not wish to have it go that way, lest the German readers of the American Bee Journal might not think very highly of my conception of the German language. I did not say that the Germans nowadays call the queen-bee "kœnig" (king), for the intelligent, up-to-date bee-keepers do not. But it is a fact that this word "kœnig" has been used by the people just the same as the word "king" has been used here among English-speaking people.

In the case of the drone it is true that in the German language the drone has the feminine gender—"*die* drohne."

F. GREINER.

* * * * *

EMERSON TAYLOR ABBOTT is no longer connected with the Modern Farmer and Busy Bee. We learn this from the following, which we received from Mr. Abbott last week:

"NOTICE.—I hereby cancel all offers to furnish the Modern Farmer. It has past beyond my control. Forced out because I objected to a certain class of advertisements. —EMERSON T. ABBOTT."

Mr. Abbott was making a good paper, and it seems unfortunate that his connection should be severed. But we are glad to know that he values principle above financial gain. There are too many in business who are just the opposite. Truly, the love of money is the tap-root of much evil.

* * * * *

THE MAN WHO SUCCEEDS.—The man who makes a success of an important venture never waits for the crowd. He strikes out for himself. It takes nerve. It takes a great lot of grit. But the man who succeeds has both. Any one can fail. The public admires the man who has enough confidence in himself to take a chance. These chances are the main thing after all. The man who tries to succeed must expect to be criticised. Nothing important was ever done but the greater number consulted previously doubted the possibility. Success is the accomplishment of what most people think can't be done.—C. V. White.

* * * * *

MR. W. T. RICHARDSON AND WIFE [of California], who spent several months in the East, have returned to his ranch and his bees in the Simi Valley. He reports better bodily health, but a sickly dry-weather feeling when he considers bee-matters. A goodly number of his 1,200 colonies are still on deck, but a good amount of feed will be necessary to carry them thru the season, provided it does not rain. Our conversation in this country is regulated by that proviso. J. H. Martin, in Gleanings.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Biographical.

MR. A. C. SANFORD.

My father and mother came from Newtown, Conn., to Wisconsin in an early day. I was born in 1852, at Ashippun, Dodge Co., Wis., and lived with my parents till 21 years of age. I was married to Irene Blair in 1874, and in 1876 we moved to Pierce Co., Wis., where I have since resided. I located in a heavily timbered section where the basswood grows tall, clovers abundant, and wild flowers are in profusion—a bee-keeper's paradise.

In my youth I loved bees and honey very much—especially the latter—and early I was eager to learn all about them. But father did not keep bees, and there were few kept in that locality, and those in a primitive manner. I longed to get a chance to try my hand at bee-keeping, but was obliged to be content with hunting bee-trees, and I learned in that way some of the habits of bees.

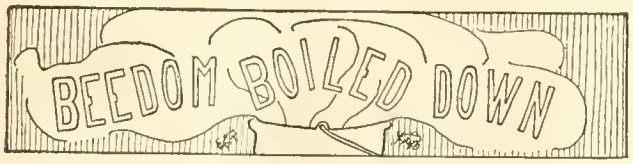
In 1876 I purchast my first colony of bees, paying $7.00 for them; then my study with the bees began. I had the opportunity of being neighbor to a bee-keeper of considerable experience, and from him I learned many things.

My first season I got about 30 pounds of comb honey and one swarm. The first winter I lost the old colony, but the new survived. The following spring I purchast several colonies in box-hives, and experimented with them by transferring to frame hives. I procured the book "A B C of Bee-Culture," and with the aid of Gleanings and the American Bee Journal I was soon into the mysteries of bee-keeping. My wife used to say, "Albert, you spend so much time with those bees that they won't amount to much;" but the first thing she knew I had a fine lot of honey, and sold $125 worth. Of course, after that I could fuss with the bees all I liked. And so I did. I kept on increasing till I had all I could handle (and sometimes more). I have never been without bees or honey since, and the American Bee Journal has come to me regularly ever since. So, Mr. Editor, I am nearly to the 25-year mark.

With the money I made from my bees I paid off the indebtedness on my farm, built a large brick house, improved my farm, and purchast a young herd of purely-bred shorthorn cattle in 1891, which have been kept on my farm, and have now increast till there are 30 head; also many have been sold.

This is giving the bees a good deal of credit, but any good, intelligent, industrious and honest person can do what I have done if he goes at it in the right way.

A. C. SANFORD.



Queens in Diseased Colonies, that is, queens in colonies that have suffered from diarrhea in the winter, the Canadian Bee Journal does not consider as good as if the workers had remained healthy; and the introduction of fresh queens is advised.

Breeding in Midwinter is spoken of in Bee-Chat as a thing that commences regularly in normal colonies. That shows the milder climate of England, especially as compared with the northern States, and would be a surprise to Hon. R. L. Taylor, whose queens do not commence laying till April.

The Cluster of Bees Shrinks with Cold, according to Bee-Chat, in a way that is little realized by those who have made no careful examination. On some cold morning take a peep into a hive containing one of your strongest colonies, and if you have done it carefully so as not to rouse the bees in the least, you will be surprised almost into wondering what has become of the strong colony you supposed present. "It seems hardly possible such a vast host can so contract themselves that a gallon measure will more than hold a population you imagined would fill at least a half-bushel."

Selection for Work Rather than Color.—Speaking of the careful selection made by American breeders in rearing queens, Editor Holtermann, of the Canadian Bee Journal, says: "I doubt very much if there has been enough selection for honey qualities; doubtless there has been a great deal for color." Mr. Holtermann is quite right.

Open-Cornered and Split Top-Bar Section.—The Canadian Bee Journal mentions as a great and valuable reform the introduction of a one-piece section in which the passage for the bees runs the entire length of the top-bar and bottom-bar. The publishers of the paper have now introduced a section with a split top-bar, the foundation being held in place by being pincht between the two parts of the top-bar.

Queens Don't Lay at Will.—The elder Dadant, now in his 82nd year, yet one of the most vigorous writers in the French bee-journals, now appears on the scene in Gleanings in defense of large hives. In reply to the objection that in large hives queens lay so many eggs that they are soon overworkt, and die, Mr. Dadant says: "The queen doesn't lay at will. The eggs come out when they are ripe, and the queen cannot stop their exit."

Honey Leaflets have been reported in Gleanings as not helping sales. But a recent number gives some favorable reports. C. R. Morts says, like a mustard plaster, they work according to the way they are applied. He says they're not as costly as labels, and are 16 to 1 better. F. Z. Buchanan says: "Fully half the customers to whom I have handed a leaflet along with the honey have askt, 'What's this?' lookt at the heading, and have been well along in the reading matter before I left."

Hanging Foundation the Other Way.—A "straw" in Gleanings is as follows: "W. S. Pender says that, instead of putting sheets of foundation in the usual way, he cuts the sheets in two and hangs it t'other way, and then it does not stretch. Does that mean it stretches more readily the way it has been already stretcht? [It is true, I think, that foundation stretches less when hung the opposite way to what it is ordinarily supported, than when it is fastened in the usual manner. We are just planning to reverse the hang of the cells on our rolls, because we know it will be an improvement to have them the other way.—ED.]"

Fighting Upon the Introduction of a Queen.—Mr. Doolittle says in the American Bee-Keeper that instead of dead bees at the entrance being a sign that the queen has been safely introduced, it is a sign that she may have been killed, or, what is almost as bad, mained for life. If bees fight over a queen, not one queen in ten comes out of such a fight as good as she was before. So it is desirable to have the queen caged till all fighting is over. Mr. Doolittle says:

"I have known as many as a pint of bees to be killed when the cage was thus covered, yet the queen would not be harmed at all; but let half that number of bees be killed when the queen is among the fighting bees, and she will be materially injured if not spoilt entirely."

Big Yield of Pollen with Lessened Laying.—G. M. Doolittle says in Gleanings: "Just why the queens do not breed when pollen comes in so abundantly is a mystery I have never been able to solve, tho I have spent much thought and study over the subject. The nearest I can come to the matter is that, for some reason, the bees fail to feed the queen on the stimulating food usually given at all times when she is laying very prolifically, and all know she lays only as she is fed and cared for. When laying very prolifically we see bees offering the queen food every few minutes; but at these times when pollen is coming in so as to crowd the brood it is a rare thing that I see the bees feeding the queen....It is possible that a little very thin or diluted sweet fed at such times would have the desired effect, if fed just at night, this causing the bees to feed the queen, as it generally does at all times when so fed."

Root's Column

No-Gob Foundation.

We Have it at Last.

It has been proven that wax in the base of ordinary foundation is not utilized by the bees, but is left there practically as it leaves the mill; and the result is, when drawn out into comb, the so-called gob, or fishbone, in comb honey.

Our New Thin-Base FOUNDATION

is exactly what its name indicates—foundation with a base as thin as natural comb, with heavy deep walls.

Fig. 7, herewith shown in cross-section from an actual photo, represents the new thin-base heavy-walled foundation running about 10 feet to the pound.

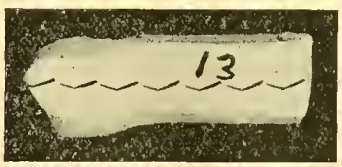


Fig. 13 represents the ordinary thin foundation with heavy base and scarcely any wall, about 10 feet; the heavy base, without modification, going right into the comb honey with very little change, and forming fishbone.

We have so far only small dies, and cannot afford to sell this product for less than 75 cents a pound.

Seven or eight pieces, large enough to fill 4¼ sections, 15 cents, postpaid; 24 pieces, prepaid, 40 cents.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bees Did Very Well.

My bees did very well last summer. It was the first year that I ever handled them. I am 13 years old, and tend my father's bees. We have 109 colonies. I had 60 swarms last summer, and I expect to do better next summer.

LAWRENCE BROYLES.

Socorro Co., N. Mex., March 21.

Banking Hive-Entrances with Snow

I have just been out shoveling snow up to the hive-entrances, as we put out our bees (one-half of them in the cellar), and it grew cold almost immediately, and they got no flight. It snowed more or less for three days, until we have had the deepest snow of the season—about one foot—and when the sun shines the poor bees fly out, and every one is lost, so we bankt snow around the entrances, yet some push out, but I think the snow will soon go off.

MRS. L. C. AXTELL.

Warren Co., Ill., April 1.

Not a Colony Lost.

My bees came thru the winter in fine shape. I have not lost a colony, but some report heavy losses. I have now young bees cutting themselves out of the cells, and combs entirely filled with brood.

F. C. YENTSCH.

Lawrence Co., Mo., April 7.

All Wintered Well.

The valuable American Bee Journal has been a great help to me, and I can't get along without it. To-day has been bright and warm, so I got the bees out of winter quarters, and they had a glorious flight. I put in 11 colonies, and all came out brisk and lively. I hope some time to know a little of the much to learn about bees.

C. W. HEWITT.

St. Lawrence Co., N. Y., April 10.

Severe Loss in Wintering.

The past winter has been severe on bees. My brother told me that about 50 percent of them have "died out" in Salt Lake County, and other localities in the State. Pres. Lovesy has lost all but 4 colonies.

H. W. DUDLEY.

Salt Lake Co., Utah, April 6.

A Long, Tedious Winter.

This has been a long, tedious winter for the bees in this country. I put mine into the cellar about Dec. 1, and they are still there, but I hope to get them out in a week or 10 days. There is plenty of snow on the ground at present. I expect to lose one-third of my bees. I put 122 colonies into the cellar, and will be glad if I have 80 the first of June. Some have lost all already. We had a good, average season last year, and hope for the same this year.

J. J. MARSHALL.

Vernon Co., Wis., April 7.

Sympathy Wasted on California.

So much sympathy being wasted on the Southern California honey crop for 1899, and in reference to Mr. C. H. Clayton's letter on page 184, where he says, "We shall make nothing this year," I feel in justice to Southern California to say that it will be well to let the creature die before you bury her. Now "shall" is a very strong word, and I, for one, think the word "will" would have been much more appropriate, as I consider the present prospects

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.
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EGGS FROM BARRED PLYMOUTH ROCKS — Thorobred — Fine Plumaged Fowls—Farm Raised—75 cents per dozen.
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Thousands in successful operation. Lowest priced 1st-class hatcher made
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SPRAYING with our new patent KEROSENE SPRAYERS is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best. THE DEMING CO. Salem, O. Western Agents, Hennion & Hubbell, Chicago. Catalog, formulas free
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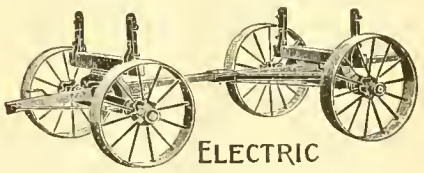
BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and rear hounds are made from the best angle steel,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which is neater, stronger, and in every way better than wood. Well painted in red and varnisht. Extra length of reach, and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co. Box 16, Quincy, Illinois, for their new catalog, which fully describes this wagon, their famous Electric Wheels and Electric Feed Cookers.

SILVER GRAY CARNIOLAN —QUEENS— ALSO THE
Golden and 3-banded Italian.
Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.
C. B. BANKSTON, - Rockdale, Texas.
13Atf Please mention the Bee Journal.

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This is the Verdict of Thousands of Customers and the Acknowledgment of Competitors.

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Queens for Business ******
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

6E8t **J. P. H. BROWN, Augusta, Ga.**

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ANYONE INTERESTED in **Agricultural Pursuits** can't afford to be without the

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Sample copy **Free to any address** upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

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EGGS FOR SITTING

Pure-bred Barred Plymouth Rock, 15 Eggs for $1.00.

Superior Rose Comb Black Bantum Eggs, 15 for $2.00. No other varieties kept.

Italian-bee keepers being men of good taste and sound judgment should beep the best and most profitable kinds of Poultry. Only fresh eggs used, carefully packt and sent by express. Safe delivery guaranteed. **D. S. HEFFRON, WASHINGTON HEIGHTS, ILL.** 13Atf

Please mention Bee Journal when writing.

YOUR WIRE FENCE,

whether for pigs, poultry, sheep or cattle, should stand as trim and taut in April as it did in February. **What kind did you buy?**
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

good, and if we get the rain which is now threatening, we will not be so nearly "out of sight" as some writers would picture us to be.

As to the extreme losses spoken of by many, I know not of others, but for myself I can say I have 96 colonies in fine condition out of 110 at the close of the season of 1897, and most of my losses, such as they were, were occasioned by my not requeening when they became queenless, as I thought it cheaper to save the combs and hive swarms, or make increase on them when a honey season did come.

I caught only one swarm last year, with possibly five or six lost, and have not fed any at all, and only kept a few from their more wealthy neighbors.

Now, do not come to California to produce honey, but take California for the seasons of 1898 and 1899, and compare with any State in the Union, and see how far we are behind them in proportion.

I am in favor of a consolidation of the Union and the Association.

L. L. ANDREWS.

Riverside Co., Calif., March 26.

Most of the Bees Alive.

I was afraid I shouldn't see more than half of my bees fly again; but most of them showed up alive to-day. E. E. HASTY.

Lucas Co., Ohio, April 10.

What is the Plant?

I have considerable curiosity about a plant that grows here in Washington Co., Fla. The bloom and seed-pods resemble garden-sage, and residents say that it is the same as California sage. If any of the bee-fraternity are familiar with this plant, and will tell us about it, they will confer a favor. The severe freezing of the past winter does not appear to have injured it in the least.

The roots of orange trees that were bankt up high with sand, are sprouting up; others

It Costs No More

TO FEED, RAISE AND HOUSE GOOD

Pure-Bred Poultry

than it does common stock, and it pays tenfold better. Send stamp at once for Illustrated Catalog and Poultry-Book.

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3611 Fifty-third Avenue, - **DREXEL, ILL.**

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WANTED TO BUY A CARLOAD OF BEES

10-frame Hives and Hoffman Frames preferred.

15Atf **B. WALKER, Evart, Mich.**

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ALBINO QUEENS

If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.

9A26t **J. D. GIVENS, LISBON, TEX.**

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
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BEST GOODS AT FAIR PRICES.

And that's the secret of our immense trade that has made us

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10A8t **DES MOINES, IOWA.**

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Fifty (50) colonies of ITALIAN BEES in standard Langstroth hives in good condition. Will sell five (5) colonies, or the lot, at $3.00 per colony. Also one Given Foundation Press, and one Cowan Honey-Extractor. For further particulars inquire of

14A4t MRS. J. W. LeROY, Rio, Wis.

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2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

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J. M. Jenkins, Wetumpka, Ala.

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WALTER S. POUDER,

512 Mass. Ave.,

INDIANAPOLIS, INDIANA.

are not as yet. Orange-bloom honey will be a scarce product here the coming season. Some beautiful homes that were surrounded with these lovely trees are now nude and bare, and their owners discouraged.

A heavy rain is now falling, and it is to be hoped that it will not be followed by severe drouths similar to those of the two previous years. Rain will cause flowers to bloom, and bees may do better than they have done, even if the early bloom has failed. MRS. L. HARRISON.

Washington Co., Fla., April 8.

It Pays to Prepare for Winter.

Bees put up in good shape last fall are coming out in good condition, with very few losses; but those not packt and cushioned are just the reverse.

L. O. WESTCOTT.

Saline Co., Nebr., April 10.

No Loss—Look Out for Starvation.

My bees have come thru the winter without loss. But very little honey is left. I am feeding all of them sugar syrup. I would advise all in this part of the country to look out for starvation among their bees, if they are not feeding. M. S. TEAGUE.

Pike Co., Ind., April 10.

Hive-Entrances in Wintering.

I lost seven colonies out of 36 wintered in the cellar. Those in hives with bottoms similar to the Danzy, with wide sides up, wintered finely. Six of those I lost were in hives with tight bottoms and small entrances, and one had a $\frac{3}{8}$-inch dovetailed hive bottom. Those with small entrances got damp, uneasy and moldy, while the others kept dry and clean, and are in excellent condition. HERMAN L. GLOEGE.

Green Co., Wis., April 13.

In the Midst of Fruit-Bloom.

We are in the midst of fruit-bloom, and a glorious rain. It has rained more or less during the last nine days—over two inches have fallen. Bees are in No. 1 shape.

A. R. GURR.

Merced Co., Calif., March 24.

Bees Wintered Finely.

My bees have wintered fiuely with a loss of only one colony out of 59.

J. L. GRAY.

Stearns Co., Minn., April 10.

Taking Bees from Winter Quarters.

We expect to get bees out in about a week from this date. I have found three dead colonies out of 150, but expect to find quite a few more when we come to take them out. WM. RUSSELL.

Hennepin Co., Minn., April 4.

Backward Season.

The season here is very backward. The winter has been so severe that many bees have frozen, thereby leaving many colonies weak. C. C. PARSONS.

Jefferson Co., Ala., March 23.

Well-Behaved Bees.

Our bees did fairly well last season, considering it was a poor one. They are well-behaved bees, too, seeming instinctively to know their friends, and altho they occasionally give a sting or two, that is what bees of any kind of spunk are expected to do. But, on the whole, they are very gentle, and give no trouble because of savage tendencies. My hives face the east, and all have wintered in single-walled dovetailed 8-frame hives on the summer stands; but I have a shed built over them which is open the whole east front. Around each hive

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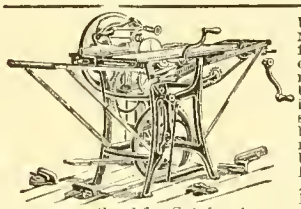

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Offer No. 3. Or, send TWO new subscribers for the Bee Journal for the balance of this year at 60 cents each, and we will order the Farm Journal for you for 5 years as a premium.

Better apply soon, as we have only a limited number of 5-year FARM JOURNAL subscriptions to offer. Address,

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Please mention Bee Journal when writing.

are pieces of carpet. They have wintered in fine condition, and were out in large numbers one day last week.

We have not had much honey for sale for a year, but our customers have come again after having purchast once, for they say the honey is surely pure.

MRS. M. B. MARTIN.

Menard Co., Ill., April 3.

Wintered All Right.

I have 35 colonies, which wintered outdoors with only a good covering of paper on the cover, and they get along all right. I have lost but one colony so far, and I am afraid they starved to death. I make my own hives and use the 10-frame Langstroth-Simplicity. I like it better than any other I have tried. C. H. ANDERSON.

Christian Co., Ky., March 31.

Two-Thirds of the Bees Lost.

We have had a hard winter here. Bees have been dying with the diarrhea on account of the poor honey they gathered last fall. Every one in this locality lost 8 colonies out of 12. A good many bees that are left will spring-dwindle, for when there are no more than a double handful in a hive they surely will dwindle, we all know.

G. RENNERT.

Summit Co., Ohio, March 29.

Bees in Fair to Good Condition.

All's well. It now begins to look like spring, and everybody is hopeful of good times and a good honey-flow. The bees, as a rule, appear to be in from fair to good condition, but my! we have had a terror of a winter for snow. It has buried all records out of sight. There was said to be four times as much as last year. It is now hoped that we may have cool weather with little or no rain, so as to prevent floods.

E. S. LOVESY.

Salt Lake Co., Utah, March 31.

Quite a Loss in Some Apiaries.

My bees seem to have wintered all right. I overhauled a few colonies early in March, and found lots of brood and some young bees, which shows that the queens must have commenced laying in the very coldest weather in February. There is quite a loss of bees in some apiaries. "They froze," they say, but of course they were not packt so as to keep dry.

GEO. SPITLER.

Crawford Co., Pa., April 6.

Wintered Poorly.

Bees wintered poorly in this locality, some losing one-half. FRANK SNYDER.

Jones Co., Iowa, April 6.

Mr. Kipling's Life Saved

By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT, Address, **DR. PEIRO,**
Central Music Hall, Chicago.

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Convention Notices.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Benna Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Connecticut.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, May 3, 1899.
Waterbury, Conn. MRS. W. E. RILEY, Sec.

CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)
Cincinnati, Ohio, April 7, 1899. 15Atf

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

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Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

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Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 8.—Choice grades of white, 12@13c; travel-stained and light amber, 10@11c; buckwheat and dark, 7@8c. Extracted, white, 7@8c; amber, 6@7c; dark amber, 5@6c. Beeswax, 26c.
Stocks of white comb honey are about exhausted, and this is as it should be if a market is to be had for the expected large flow of nectar from the season of 1899. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.
Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.
M. H. HUNT.

NEW YORK, March 8.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat and dark, 6@7c. Comb honey is pretty well cleaned up now and we expect to dispose of the balance of our stock during this month. Excepting California there is not much stock of extracted on our market. Demand is fair at unchanged quotations. Beeswax, 27@28c.
HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, April 5.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6¾@7c. Beeswax, 26½@27c.
Beyond a small jobbing trade, mainly out of supplies in second hands, there is nothing to record in the way of business. There are only moderate supplies, and these are mainly comb. Values are steady. It is too early to get definite information concerning coming crop, but it is not likely to prove large in this State.

BOSTON, April 1.—Fancy white, 13c; A No. 1, 12@12½c; No. 1, 11@12c; No. 2, 9@10c; demand fair; no call for dark. Extracted, supply very light, good demand. White in 60-pound cans, 7½c; light amber in barrels, 7c. Beeswax, very light stock, good demand, 29c.
BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c. PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & Co.

BUFFALO, April 1.—Little or no strictly fancy one-pound comb honey here. It would sell well at about 11@12c. Few lots of common, dark, etc., arriving, and sell at 7@8c mostly; some very poor at 6c. There is no extracted here; worth from 4½@5½c; extra fancy, 6c. Fancy pure beeswax, 30@32c; poor, 25@28c.
BATTERSON & Co.

OMAHA, April 1.—Fancy white quotable at 13@13½c; choice, 12@12½c. Extracted, 6½c.
Quotations are practically nominal, as there is no stock left now in receivers hands, and dealers have also but very little left. There will not be a pound of any kind of honey carried over in this market. PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.
Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand.
A. V. BISHOP & Co.

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Falcon Sections are the Finest Made.

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1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.
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Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

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L. C. Woodman	Grand Rapids, Mich.
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Inter-State Mfg. Co.	Hudson, Wis.
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J. W. Bittenbender	Knoxville, Iowa.
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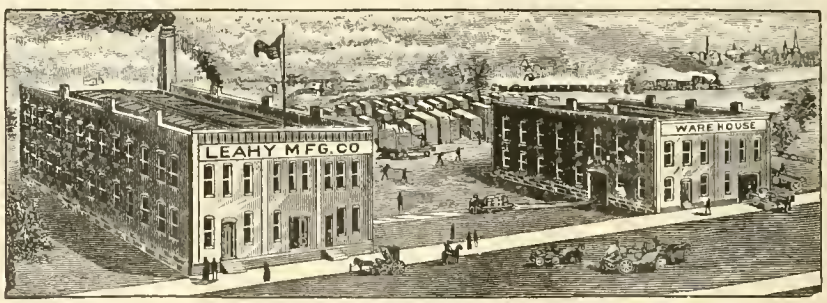

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Eastern Bee-Keepers!

Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

ITALIAN BEES AND QUEENS.

These Apiaries are run for HONEY and pay well, as the bees are hustlers.

Untested Queens, 70 cents; 3 for $1.80; 6 for $2.70.
Tested Queens ..... $1.00 each.

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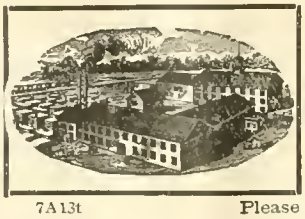

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ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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CONTRIBUTED ARTICLES

Concerning Bee-Moths and Robbing.

BY HARRY S. HOWE.

DURING the past few weeks I have attended several bee-conventions in different parts of the State.

Among the things that struck me as worthy of note was the number of people who had questions on the two subjects—bee-moths and robbing. Generally the man who was interested in one also had some questions on the other.

And not less curious to me were the remedies proposed. One man advised that the combs to be kept from the ravages of the moth be first soakt in brine, then dried and packt away. When they were to be used again they were to be soakt in fresh water to remove the salt, and then dried again!

Some years ago I bought out a bee outfit. The former owner wintered the bees in a double-walled house. Some time during the previous winter he died, and the family, being afraid of bees, opened the door, but left those bees just as they were. When I got them later in the season there was a sight. The rats had eaten the lower tier of hives about all to pieces. Some of the bees had moved out and taken up their abode in the corners of the room. Others had succumbed entirely, while 15 colonies still held the fort in their hives, and the moths—well, there was a great chance for missionary work. Yet in a season or two, without any special treatment, there were no moths to be seen. And the bees were not Italians, either.

All the precautions necessary to keep my large stock of extracting-combs even at that place are to space them one less to the hive than they are used in the summer, and then leave them where they will freeze during the winter.

The moth passes the winter usually in the egg-stage, and a good, solid freeze will kill those so in the spring there are no worms to eat the comb.

There are usually two broods during the season, one in the spring, the other during the fall. It takes about three weeks for the larva to mature.

Another point in the safe keeping of combs is the presence of pollen or dead brood. The larvæ of the moth cannot live on wax alone, they must have some other food. Now, combs used for extracting seldom have any pollen or other nitrogenous food for the worm. The combs which are in hives where the bees have died are the most liable to their attacks. How to protect them brings me to the second of those two questions—

HOW TO PREVENT ROBBING.

We used to think that we must not let a bit of honey be exposed when the bees were not storing honey or we should have trouble from the robbers, but now we do about as we please in that regard; that is, always keeping in mind certain laws.

When the bees start to rob a place, if we can make them think they have got it all, there will be no further trouble, while if we cover up or take away the honey they will keep on looking for it.

Now for my method of feeding the bees, and at the same time caring for the combs that are likely to be troubled by the bee-moth:

As soon as the bees begin to work in the spring, I go around and take out all the dead ones and store the honey and combs in the honey-house. Then I put out one or two hivefuls of it somewhere at one side of the apiary, leaving the entrances so the bees can get in and carry away the honey. As fast as one lot is carried away I put out more, as long as I have more to put out. Then I go thru the hives and take out the heavy combs, replacing them with the ones first cleaned out, letting them carry this honey back in turn. This I keep up clear to the time of the honey-flow.

No self-respecting moth will stay in those hives that are used for feeding; things are too much stirred up, and

J. L. Hubbard—See page 265.

the combs go into good, strong colonies often enough to discourage them if they tried it. If we can keep the spring brood of worms from maturing, we shall have to wait for more until our neighbor sends them to us in August again.

As to robbing, the only time I ever see any is at the last extracting, after the honey-flow stops in the fall, and

not then unless we are a little too slow in getting over the yard. I mean bees trying to rob one another. I usually give them something else to think about at that time.

As fast as the combs are extracted they are spaced and piled crosswise of one another so the bees can get at them freely. Soon the bees find that there is honey to be had in the back part of the honey-house, and they start in to clean those combs. By the time the last one is piled away there is a scent like the one Ernest Root so graphically described after one of his visits to W. L. Coggshall, but there is no robbing in the yard.

Perhaps if one workt slow enough the bees might get started on colonies that were opened any time when there was not a honey-flow, but life is too short and honey too cheap to spend that amount of time over any one bee-hive.

I cannot better sum up the question than by quoting a remark made at dinner at a recent bee-convention: "No good bee-keeper is troubled by bee-moths or robbing."

Tompkins Co., N. Y.

Methods of Introducing Queens.

BY FRANK COVERDALE.

SOME years ago I sent to a Massachusetts queen-breeder for six queens, and they were to be introduced according to his plans, and if any failed to become safely introduced the dead would be replaced by living queens. His instructions were to remove the old queen from the hives that were to receive the new stock; and bare of the candy, at once lay the cage over the frames and close the hive for five days—a thing which I did, and found only one queen that had been accepted.

Two or three years later I received an albino queen from an Iowa breeder, but this time I made the colony queenless that was to receive the queen 48 hours before introducing, and lost my queen. I could not understand why it was that these queens, coming from a distance, were rejected by my bees when I had no trouble in introducing my own stock among my own. May be some one can tell.

I sent South last spring for 50 queens, and when they arrived all were laid on the shelf, and 48 2-frame nuclei were made, and all shut up tight with wire-screen until 48 hours had past, then the 48 queens were laid on top of the frames as before, and every single one was accepted. All had started cells in abundance, but when the queens were set free all cells were destroyed. I didn't wait five days, either, to see what was going on, but took a look at any of them at any time I chose. The remaining two were introduced in full colonies, but not confined with equal safety. I think I would not be afraid of introducing any number when done as above. Tho others may have plans that work equally well, I am not afraid of this plan in my hands.

Jackson Co., Iowa.

Strawberries and Bees for Women—Propolis, Etc.

BY MRS. L. C. AXTELL.

I THINK strawberries as a side-issue go well with bee-work for women. The question is often askt, What other work can women do besides caring for bees, as honey sometimes fails? Strawberries never fail with us.

In the first place, she needs to dress suitably for out-door work. This is of the utmost importance, for if she tries to dress as she does for house-work, her health will suffer. She should have a good, strong pair of boy's boots, warm underclothing, and a dress of strong material like gingham or flannel. I like flannel for cool weather, as it does not catch the dirt like cotton goods, and always looks neat.

Most farmers' wives expect, and almost always have, lettuce, onions, beans, etc. Let them *determine* to have strawberries, also, and they will have them in abundance. I do not speak from theory, but from practice. I know they are not so hard to raise as most people think, and what a bountiful crop they do repay, if we only know how to grow them; and then they are so appetizing, so luscious, coming so early in the spring before other fruits and most vegetables are ready for use.

STRAWBERRIES IN THE BEAN-BED.

To make a beginning send 25 or 50 cents to a nurseryman, or some one who has good plants for sale, and get half in staminate and half in pistillate plants. Ask him to send you his best kind for your locality and for fertilizing. As soon as received open them and put the roots in thin mud in a basin, but don't get the leaves muddy.

Now towards evening set these out in the bean or radish or lettuce bed, or early cabbage bed. Set them in just deep enough so the ground will be level around them, and the roots well spread. As these plants grow to need the room, pull out the lettuce, radishes, etc., and give them room. Cut off all the flowers that bloom on them the first spring, for if they should fruit the first year they would not amount to much—would be small and hard.

Keep all the runners cut off until the first of July, then after that time set the runners by spreading them out in all directions from the main plant, like the spokes of a wagon-wheel. What is meant by covering up the runners is to put a little fine dirt on the end of each runner, and press it into the ground so it will take root.

The reason I speak of planting the strawberries in the beds of the vegetables is because the ground is generally in good condition for planting the vegetables, and will be likely to be kept mellow the first part of the season; but if the strawberries can be given a bed all by themselves, all the better; and if the ground could be gotten ready in the fall, by being made very rich with barnyard dirt, and plowed or spaded in, and the ground made very mellow, all the better. Then plant the strawberries as early in the spring as you can get the ground ready, as early planting is always the best. Now, do not think this too much work for you, as it is no more work to raise strawberries than flowers, and they pay ever so much better. Besides, the strawberries have beautiful flowers upon them, almost as beautiful as any raised in the flower-bed; and then, the plant itself, when raised on rich ground, makes a fine foliage plant. If I could find no other room I would plant it as a border along my flower-bed, or have that unsightly back yard spaded up and strawberries planted there. They will bear considerable shade and yet fruit some, but will not fruit much if continually trampt over by children or chickens, but will look ever so much better than weeds.

Strawberries for profit should be fenced away from chickens, the ground kept very rich and mellow, covered slightly in winter with straw or other covering, and good plants taken from beds that have not fruited, both pistillate and staminate varieties. They will pay largely for work on them, and it may all be done by women at times when the bees do not require attention, by getting the bees ready for white clover honey before strawberries are ripe.

If one succeeds in raising more strawberries than are wanted in the family, there is always a good sale for them, people coming to your doors for them at good paying prices; or, if you have no time to pick them yourself, they will pay by letting others pick and pay for them at a reduced price. But it should be understood that no children are wanted to trample the vines, and if others besides yourself pickt them they should be kept in narrow rows.

The early, such as Mitchell's Early and medium kinds go best with bee-work where many are raised. The latter ones, like the Gandy, do not ripen until swarming-time, but it is so nice to have strawberries even in swarming-time for table use, as they can be pickt morning and evening, and do not have to be cookt, and if one has a large dish of strawberries and a plate of honey, bread and butter, many a meal can be made out when there is little time for cooking in swarming-time.

If one raises berries for market, of course the quart boxes should be made before wanted, in leisure time in the winter, just as bee-work, such as getting sections ready for the bees, should be done in winter-time, or before wanted.

PROPOLIS AND WHITE CLOVER.

Last spring I took time when clipping queens' wings and scraped the inside of our hives and edges of combs very clean and carefully. I supposed it was nearly all propolis. I had nearly a half-bushel when I got around with all the the 160 hives. I thought it not worth saving, but did not want it thrown upon the ground to stick to the bottoms of our shoes, so I thought I would throw it in the sun wax-extractor, and was much surprised to see a nice cake of beeswax when all was melted in a day or so. It was not so light yellow as honey-comb would be, but lookt like dark beeswax with a greasy appearance, but softer than beeswax, and smelt of rosin. I think it would make a good ointment, but would not do for foundation, even for the brood-nest.

Bees are flying nicely to-day (March 9). Just after the severe cold weather I examined all our bees that were out-of-doors, and all were alive, and apparently wintering well, altho they have not had a flight for a good while. I threw out many dead bees. One colony was injured by the mice

getting in and working in the chaff which clogged the entrance; nearly half the bees were dead in the hive. I think to winter out-of-doors in this climate bees should always have chaff or some such materieal packt around them on all four sides and on top, and raised from the bottom-board an inch or so, as was Moses Quinby's method of out-of-door wintering. We follow his plan, and find it most successful.

White clover does not seem nearly so abundant of late years as it used to be years ago in this vicinity. The roadsides sometimes used to be white with it, which has not been the case of late years. We used to think it was the dry weather that killed it, but it has been wet enough for other crops for two years now. Dry weather in the winter, and freezing and thawing, seem to heave it out and kill it.

Warren Co., Ill.

Spraying Fruit Trees and Bushes.

BY F. A. SNELL.

A GOOD deal has been said and written on this important subject, and yet there are some who do spray at a time when all informed persons and all writers say it should not be done. That time is during the blooming period. All who have given the matter intelligent thought know that spraying at this time is worse than useless in destroying the codling-moth, as the eggs have not at this time been deposited, for there is no place to deposit them. The eggs are not laid by the female moth until the fruit is formed, and the eggs are then deposited in the blossom-end of the apple. It is thus evident that spraying earlier is of no value, as there is nothing to destroy in this direction.

Much harm will result from spraying while the fruit is in bloom. The busy bee—the best friend, and most useful one, the fruit-grower has—while in search of honey and pollen will be poisoned from that thrown upon the blossoms by spraying. In this the fruit-grower is deprived of the great fertilizing agent—the busy bee—for while gathering food for its own use and the rearing of young, it carries the pollen-dust from blossom to blossom, thus fertilizing them, without which very little fruit could be secured. The bee-keeper also suffers from the great loss of bees, which means to him depleted colonies, and as a result of this perhaps little or no increase of colonies, and no surplus honey, when had it not been for the stupidity of the one who did the spraying while the fruit was in bloom, a good increase in bees and a fair to good crop of honey might have been secured by the apiarist.

This matter of spraying at the right time is a very important one, and should be kept before the people who do not all yet seem to understand its importance, until the public is well-informed.

According to the best authorities I have read, there is no fruit that should be, or need be, sprayed until out of bloom, when apples, plums, cherries, gooseberries and currants should be sprayed to destroy the insects or worms which prey upon them. Spraying with the proper materials soon after the bloom is over will largely destroy the fruit depredators, but it is well to give two applications, the second one being given about one week after the first.

I have used paris green for a good many years, and have found it to be very effectual in destroying every insect or worm that feeds upon the fruit or foliage of the trees or bushes. London purple is also a good insecticide, but I have not used this, as paris green has pleased me so well.

Leaf lice have appeared the past few years on the leaves of apple and plum trees, which we spray with paris green to good advantage.

For currant-worms, which attack our currant and gooseberry bushes, we have used both the paris green and white hellebore, and rather prefer the latter, which may be applied in the form of powder or liquid. A sharp watch should be kept of the bushes, as the worms come up from the ground and do rapid work, first working on the lower leaves. They begin their work when the leaves are about one-fourth grown. The poison would better be put on the first time a little in advance of the worms, and thus nip them at the start. Two or three applications at intervals of five or six days will suffice, and leave the bushes and fruit in good condition.

Spraying to destroy fungus that works on or attacks the leaves of fruit-trees and numerous others, as well as bushes, potatoes, etc., is also an important work which should be done. The first application needed for this is at the same time at which we should spray for the codling-moth and the other fruit enemies which begin their work about the same time. According to no less authority than Prof. Burrill, of our State University, the spores that have until recently been supposed to live over winter on the twigs of trees do not do so, but instead live over winter on the leaves that drop to the ground, and there remain until spring weather ripens them, when they float in the air and later attack the leaves of trees. Now the destruction of the two may be accomplisht at the same time by using the poison and a fungus destroyer, the two being mixt together and applied with a good sprayer a few days after the trees are out of bloom. A second application should be made about one week later, or in a little less time, rather than later.

The fungicide or preventive is composed of sulphate of copper, three pounds, to be dissolved in eight gallons of water. In some convenient vessel two pounds of lime in three gallons of water is slackt, and when cool is poured slowly into the copper solution, at the same time keeping the liquid well stirred so that a thoro admixture may be effected. To this I added four heaping teaspoonfuls of good paris green, and mixt thoroly. Before filling the sprayer the liquid was well stirred each time, so that the work would be more effective. No sediment should be put into the sprayer. The quantity mixt can be varied to suit the needs of the user. The proportions should be kept about the same.

No fruit or other tree or bush can remain healthy and produce good fruit unless the fruit and leaves are kept in good condition. The leaves are the lungs, and must be kept free from preying enemies, the same as should be the fruit. Wormy apples, stung plums, wormy cherries, currants and grapes may be reduced to the minimum by spraying, which is the only way that the best fruit can be preserved. This with good culture and care in other directions will give us good fruit in abundance.

From the fact that the spores live over the winter on the fallen leaves, as Prof. Burrill says, it is very evident that all leaves should be burned during fall, winter, or very early in the spring, so the fungus spores may be destroyed.

What has this to do with the apiarist? some may ask. It is this: In order that our bees may reap the great benefit from an extensive fruit-bloom it is essential that our fruits of all kinds be kept alive and in abundance, which can only be secured by preserving fruit-trees and bushes in a healthy and vigorous condition, and bear, to encourage still further planting. With no fruit-bloom our bees could not be strong enough to secure any surplus honey from white clover, or but very little at most. One who has not tried it would be surprised at the amount of such work that may be done in a day, or even a few hours, with suitable and cheap conveniences.

Carroll Co., Ill.

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

A SEEMINGLY HILARIOUS CONVENTION.

Inauspicious the opening of that Chicago convention! First they put up the Beers, and then somebody called for Moore; and then they all gave willing ear to a foul subject. Mr. Taylor himself might almost be suspected of hob-nobbing with Beers, when he leaves us in doubt whether foul brood *smells* like a bad case of dysentery, or only that the looks around the entrance of the hive suggest it. But he tells us something of sober value when he says for us to tinker with foul-broody bees only when no bees whatever are on the wing. (Page 161.) 'Tater doesn't believe that dysentery and foul brood smell alike; but his experience is scanty. Doubtless in early spring the same colony sometimes has both diseases at once—to the confusion of non-expert noses.

DON'T CROWD VILLAGES WITH BEES.

On page 181, Dr. Miller is admirable in willingness to yield the monopoly of the honey-trade, that the fertilizing office of the bee may be carried on everywhere, to the general good of the human race. But the logic is not quite

faultless that would insist on keeping bees inside every village for that reason. Our villages are not so large but that outside bees can cover them. We err a little (the rest of us, not Dr. Miller) in trying to "spunk up" our spunky brethren to persist in disregarding protests, where families live right adjacent, and want their little children to play out-doors without being stung. Move the bees a short distance, into a vacant vicinage, before the irritation grows to an ordinance of expulsion.

NUMBER OF BEE-KEEPERS IN A COUNTY.

I don't know whether the 150 bee-keepers of Cook County have occasion to say, "Teacher, they're crowdin' here," or not. A survey township of suitable territory would have space for nine apiaries, and allow four square miles to each. Now add as many more who only want to keep just a few colonies, and we have 216 to the county. Cook County on the map looks like 20 townships.

A FEW OF MR. DADANT'S SUGGESTIONS.

C. P. Dadant, on page 164, gives us the new phrase, "experienced novice." Well, yes, that's him—handles his bees as a lusty baby handles a kitten—really more for the sake of handling them than for the nominal object—and the inexperienced old-fogy's bees win the race. Mr. D. also formulates a handy new rule: As many combs as they can cover, and two more, for a colony at spring examination. I guess that's a good rule, altho I don't quite live up to it. I seldom take out combs unless the bees are quite weak. In one thing I think a warning is needed, where Mr. Dadant says that a colony given a comb of sealed honey will not show excitement and attract robbers—*some* danger, I fear, when the colony is weak, and also on short allowance. On page 180, he makes a good hit in saying that thin food in spring, if not unreasonably thin, will stimulate more, and save many trips for water, which often cost heavily in bee-life.

LOOK OUT FOR A "HOT TIME."

In Dr. Miller's excellent department (page 166), he let slip one incautious expression that may do harm—where he says pour the syrup "pretty hot" into the combs you are filling to feed bees. As I have "been there," I have a right to protest that one needs to look quite a little out or he will damage combs by softening the wax. With hot syrup in it, "first you don't know" your comb tumbles right out of the frame. A *little* hot syrup can be put in the middle of a tough old comb; but even thus the ends of the cells are destroyed by a touch.

THE "IMPROVED SPELLS" GIVE 'TATER A BAD SPELL.

And so (as per page 169) we are to have a new batch of improved spells. 'Tater feels an interest in this matter; but personally he thinks he is too old to get rid of his orthographical prongs now. Luckily he is not too old to find fault—and he finds some with that new word "thoro." Either let it be, or spell it "thuro." Don't rile us with what impresses the eye as a bran new word, with its first vowel masquerading in the place of another vowel. Of course, sometime in the future it will have to be changed again—just a wretched case of cutting off the dog's tail at two times.

A QUARTET OF "AFTERTHINKLETS."

Three years' experience with artificial heat in wintering, and not a colony lost, is valuable testimony. Thanks due to A. E. Bradford, page 171.

Mr. Bingham didn't say directly that he winters his bees out-doors, in northern Michigan, but it sounds so; and if such a big hole in a hive as an entrance 7/8x12 inches results well, that is valuable testimony. Page 173.

It seems I did Mr. Hart an injustice. He was seeking to doctor some honey, but only to make bee-food of it. Glad to correct.

Three-story 15-frame Langstroth hive, just the thing to convert the world with, eh? Well, here we are, Mr. Riker, all sitting in the rowdies' corner, eating peanuts, and waiting for the services to begin. Page 191.

MORE ABOUT FACING HIVES.

Mr. Reitz, on page 189, strikes another consideration of some importance on the hive-facing question. Sometimes colonies faced west will get a pretty good flight in winter when those faced east got none. And here's another item I would add: When one or a very few hives face south or west, and all the rest east, and when there comes a winter day that they all fly, the first-mentioned hives may get very strong in bees *at the expense of the others*—bees stay out till the east doorways are shaded and cold, and then seek a warm, lively entrance to go into. As bees usually behave as free commoners in winter, they can easily do this. And if it happens that the only hive faced a warm way is one the keeper is trying a wintering experiment on—just you hear him shouting what a valuable discovery he has made.

THE BELL ROBBER-BLOCK.

G. W. Bell's robber-block, page 188, will very likely be of some use in cases where the assailed colony has spunkt up during the night. Its strong point is that the robbers think the proper place to get in is on top of it. But of course they'll find the new route unless the bees inside defend tolerably well.

THAT GERMAN CASE.

On page 186, paragraph 12, that German case of a great swarm that yielded less surplus per pound of bees than swarms less than half as large did is important *if valid*. I think it common for the old bees of mixt swarms to half of them go home during the first few days after hiving (don't like the miscellaneous company), and unless the managers of this experiment assured themselves on this point the result has no special significance.

CONSOLIDATE FOR BETTER LOOKS.

It will *look* better to have the Union and Association consolidate, and page 184 reads as if the prospective wedding was approaching—Niagara Falls condition—"nuthin' to hender"—or at worst only a few broken bones and delayed love letters.

HONEY-DEW ON THE GRASS.

I like to see a man fight well on a losing side; therefore I incline to cheer S. W. Maxey (page 178) in his plea for real honey-dew right from heaven. I shall be a glad and easy convert if I can *see* a little of this—but at present I apprehend that the sweet on the grass was direct exudation, or possibly from wounds made by grasshoppers, and so practically the same as stubble-honey—or what's to hinder its being insects down on the sod, and firing the nectar up *a la* Theilmann? At any rate, honey on the grass will have to be allowed the name of honey-dew.

PROF. COOK BALANCED OFF ON HONEY-DEW.

Mr. Cowan is one of the first-class authorities, and if he is convinced that honey-dew is sometimes a direct exudation from leaves, without insect agency, Prof. Cook is balanced off—in fact more than balanced off—as one competent witness, holding actual and direct evidence, weighs more than ten equally good men who hold merely the *absence* of evidence in situations where evidence might be lookt for.

MR. THEILMANN'S FIRE-ENGINE PLAY.

Also Mr. Theilmann's case of honey from the nodes of birch leaves—we shall have to allow that to be called honey-dew, too, as it gets spattered around upon the leaves. We are glad to hear of its excellent quality. (Say, not a great while ago I was on the side which appears to be licking its adversaries out. Prof. Cook, behold your recent convert's back-sliding under the loam). Mr. Theilmann's experiment with the aphides, making them eject by having some one jar the tree, and looking toward the sun to see the sprays, and especially the surprising distance they can play fire-engine, are valuable contributions to our knowledge.

THAT EXPERIMENT IN PRODUCING EXTRACTED HONEY.

And now I haven't half the room left that might be well devoted to Mr. Davenport's experiment, on page 179. Probably it would not turn out the same all years and all locations. Right glad am I to see that the result favors neatness and propriety. To let the queen run "amuck" thru all the combs decreast the surplus instead of increasing it—to this tune, 500 pounds, 175 pounds, 150 pounds; the better score being where the queen was kept in one story. As to non-swarming, the result is the other way, to be sure; but then many of us are not prepared to give our colonies each three stories of finisht comb, anyway; and with less than that, swarming is only decreast a little, not prevented. Rearing a great host of bees too late to be of any use, is credited with the above decline of surplus.

COGITATOR.

The Premium offered on page 254 is well worth working for. Look at it.

CONVENTION PROCEEDINGS

Report of the Vermont Bee-Keepers' Convention.

BY M. F. CRAM.

The 24th annual convention of the Vermont Bee-Keepers' Association was held at Middlebury, Feb. 23 and 24, 1899. The meeting was called to order at 1:30 p.m. by Pres. R. H. Holmes, prayer was offered by O. J. Lowrey, and the minutes of last meeting were read and approved. The following committees were appointed by the chairman :

NOMINATIONS—A. E. Manum, W. G. Larrabee, and J. I. Clark.

RESOLUTIONS—W. H. Bristol, H. L. Leonard, and G. W. Fassett.

Next in order was the following paper by W. G. Larrabee, on

The Production of Extracted Honey.

Bees run for extracted honey should be watcht more closely in the spring to see that they do not get short of honey, for I find that I am more liable to be deceived on the amount of honey in the hive, as they will fill all of the combs for perhaps two inches below the super, and the rest of the comb will have no honey in it at all. This is not an invariable rule, but it is more liable to be the case when run for extracted honey than for comb.

I use 10 Langstroth frames in the brood-chamber, and a division-board; and 10 Langstroth frames in the upper story without a division-board, spacing the frames a little farther apart. This allows the bees to lengthen the cells a little, and they can be uncapt more readily, and more honey can be put into a frame.

I put the upper stories on before the bees begin to get honey to amount to anything, and before white clover opens, sometimes in fruit-bloom. I do this in order to give them plenty of room before they begin to get the swarming-fever, and do not let them get their hives too full before extracting.

I extract as soon as the combs are about one-third capt, and in most years honey will not sour if as ripe as this, but at the close of the season I like to let them cap the combs nearly all over, as I think it gives the honey a better body, and is less liable to sour. I use queen-excluders on all hives, and could not get along without them.

When the honey is ready to extract, I go to the yard toward night and put the bee-escapes on the hives that need extracting, and the next morning they are usually free from bees. (I say *usually*, for sometimes an escape will not work, or something of the kind.) I am then ready to extract.

I have an uncapping-tank that allows the honey from the cappings to drain off at the bottom, and quite a lot of honey is saved by so doing. I have a 30-gallon can with a honey-gate; I tie a cheese-cloth strainer over this, and let it sag down enough to hold two large pailfuls of honey. As fast as it is extracted I pour it into this, and allow it to drain thru at its leisure, and it will usually run thru as fast as I can extract it. From this large can it is drawn off into 60-pound cans, of which I am careful to have enough at the yard where I am extracting, and it is then ready for market.

The empty frames are returned to the hives after I am thru extracting—usually towards night—and after the honey-flow is over. They should never be returned at any other time except toward night, for if it is done in the morning, or middle of the day, it will excite robbers to such an extent that you will not care for a second dose.

I always put the empty combs back on the hives at the close of the season, and leave them there until cold weather comes, as the bees can take better care of empty combs than I can. But if this is done, queen-excluders should always be used, or one will be likely to find the bees all in the upper story, and the honey for winter all in the lower story.

As I have said before, great care should be taken not to be deceived on the amount of honey in the brood-nest in the fall. I have opened many a hive that apparently had plenty of honey, but upon closer examination there would not be more than 20 pounds, and this is not enough.

There is nothing to be said about winter packing, for they are packt the same as those run for comb honey.

I do not have very much trouble with swarming—about all that I do have is from some very strong colonies that get their upper story too full before I get around to extract. I usually give such colonies several empty combs a few days before I extract, or divide them. About all the increase I have at this yard I get by dividing.

I have been surprised to see the difference there is in different seasons in regard to the average amount of honey produced by bees run for comb and for extracted honey. Some years they will produce but very little more run for extracted honey than for comb honey, but last year they produced more than twice as much extracted as comb. This is why I have made such varied statements in past years in regard to the relative expense and profit of bees run for comb or extracted honey, and I am not yet able to say which pays the better. W. G. LARRABEE.

Prof. George H. Perkins, entomologist at the Vermont Experiment Station, then gave a lecture without notes on the relation of other insects to bees. He exhibited a German collection of bees, and different kinds of combs, showing some of the diseases of bees as they would appear on the comb, all under glass. Also a collection of the forest worm that has wrought destruction to some of the finest maple orchards in the State. It strips the apple-tree of both leaves and fruit, also the basswood, so that it yields no honey. Certain insects were very closely related to the bee, especially the bee-moth. Every insect which injures the flowers injures the bees. Things do not happen by chance—there is a reason for everything. He would make no promises, but thought we had seen the worst of the forest worm, as the Ichneumon fly was destroying large quantities of them. Out of 200 cocoons that he examined at one time, only 30 developt, or 15 percent. The eggs on the trees were laid in cylindrical form, both edges of the cluster being very nearly true around the twig, while the common tent or apple-tree worm laid its eggs more irregularly, tapering off more or less each way. They could be cut off from small trees by taking a long, slim pole with a knife in the end of it. People were learning that cross-fertilization was necessary. Bees would still be a blessing if they never gather honey.

The Professor was askt a large number of questions, which were answered in a very pleasant and satisfactory manner, after which he was tendered a rising vote of thanks.

SPRAYING FRUIT-TREES.

Mr. Boardman had sprayed 75 trees with 60 gallons of water and 1½ pounds of paris green. He secured 150 barrels of apples. He sprayed the first time just as the buds began to open; the last time just after the blossoms had fallen.

Mr. Isham sprayed six times, and got no fruit.

Mr. Manum sprayed just as the buds opened, sprayed again just as the leaves came out, after that every week or ten days, but didn't get much fruit. One of his neighbors did not spray at all, and got a very heavy crop of fruit, so much that he had to prop up the trees.

Prof. Seely, of Middlebury, then gave a short talk very complimentary to apiarists, as well as instructive. He said he had learned that bee-keepers were very observing, and he had learned very much listening to them at their meetings. He first became interested in entomology in studying the apple-tree caterpillar. They were destroyed by the Ichneumon fly.

Mr. Crane said a heavy late fall of snow in the spring would destroy the forest worms and tent caterpillar; and said there was a difference in the time it took for the eggs to hatch of the forest worm and tent caterpillar.

It was decided that the president and secretary be appointed a committee to confer with the same officers of the Horticultural Society, to see if they would hold their next annual meeting together.

A report of the members present was then taken: Number of colonies in the spring of 1898, 1,779; number in the fall, 1,994; produced 80,000 pounds of comb honey and 6,000 of extracted.

QUESTION—Is it profitable to feed just before the honey-flow? ANS.—No one thought it was.

EVENING SESSION.

The reports of the secretary and treasurer were read and adopted.

After the expenses were all paid, quite a sum was left in the treasury.

PLAIN SECTION AND FENCE SEPARATORS.

Mr. Crane then gave a talk on the plain section and fence, showing the different kinds of fence. He thought it was an improvement in getting the honey filled out to the edge of the section; thought the bees would store more honey because of freer communication. At the close of the season they were more apt to be sealed. Separators made with blocks were better than cleats. Another advantage was getting the outside sections filled with the rest. He had tried some of the 4x5 inch sections; was going to do so more extensively the coming season.

Mr. Leonard used the 4x5 section.

The present committee was ordered to report at the morning session what to do in regard to experimental work.

TRAVEL-STAINS.

Mr. Leonard then gave a talk on travel-stains. It was not all the dark honey that was made the first of the season. He had honey spoiled by the bees bringing in something to stop cracks with just as the season was closing. He did not know where it came from, but thought it was the same as the last run of sap—the honey that was gathered last. It was sometimes colored by the bees using old comb and capping, and sometimes by the bees taking honey out of the brood-nest and carrying it upstairs. It was not caused by the bees walking on it, as he had left the honey on until time to pack for winter, and it was nice and white.

SECOND DAY—Morning Session.

The Committee on Nominations made the following report, which was adopted:

President—R. H. Holmes; Vice-Presidents—Addison County, J. E. Crane; Lamoille County, Geo. H. Terrill; Chittenden County, O. J. Lowrey; Orange County, P. W. Smith; and Rutland County, V. M. Forbes.

Secretary, M. F. Cram; and Treasurer, H. L. Leonard.

The Committee on Resolutions made the following report, which was adopted:

Resolved, That we as bee-keepers assembled thank our Heavenly Father for the prosperity of this Association, and trust that we may have many years of prosperity.

Resolved, That we express our thanks to John Higgins, the proprietor of the Addison House, for favors shown us at this meeting; also to the Rutland, Central Vermont, and Boston & Maine railroads for reduction in rates.

Resolved, That we express our thanks to Prof. Geo. H. Perkins, for his able address on the relation of other insects to bees; also to Prof. H. M. Seely, for interesting remarks.

W. H. Bristol, }
H. L. Leonard, } *Com.*
G. W. Fassett. }

THE HOUSE-APIARY.

Mr. Holmes then gave a description of his house-apiary. It is 51½ feet long, 12 feet wide, 7 feet and 1 inch high. In the north end is a place to drive in a team, and a large door from there into where the bees were. In the opposite end is a large door and window. On the sides are 30 windows 9x13, all hung on hinges. Each colony has an entrance 1½x8 inches. It is painted red, white and blue, each color taking in three colonies in each strip. The rafters project over two feet, so as to keep off the storm and sun. There is an alighting-board in front of each hive. The first stand for the bees is 15 inches from the floor, the upper one 4 feet. The frames running crosswise of the entrance make it easier to manipulate. There are several tables and benches thru the center of the building, the longest one 18 feet.

He moved the bees from out-of-doors into this house just after the honey-flow began, at night, in three different lots. The first time 31 colonies were carried in; they were the best ones. Some of the bees went back, and that strengthened those that were left. He carried in 19 the next time, leaving 11 of the poorest out-doors, which it strengthened immensely, making them about equal to the others. All were in good working order, and no fighting.

The whole cost of the building, aside from the work, was $278.

Some of the advantages were, to be able to work when it rained; bees did not sting as badly as out-of-doors; he is not troubled by robbers, and could stay all night if it rained, and had done so several times. He had been awakened quite suddenly sometimes by a bee falling on him, striking sharp end first. He could take off honey much faster—had taken off 1,200 pounds after 5 o'clock p.m., and got the bees out before dark. Bees mix more or less, and some of the disadvantages were that he could not see quite as well, especially when looking to see if the young queen had begun to lay. Out of 29 colonies 16 were queenless when looking to see if they had begun to lay. Some had superseded their queens, and then lost them. He would be obliged to have nuclei to supply the lost queens.

Mr. Leonard had a house-apiary, and lost half of the colonies each season, mostly in the fall. He thought they were too warm in February and March, causing the bees to breed too early.

MISCELLANEOUS DISCUSSION.

Then came general discussion on the different kinds of foundation. I think the Weed process came out ahead. Mr. Cook said Southern beeswax was harder than Northern.

How to get the most benefit from experimental work. The following committee were elected to confer with the board of control: O. J. Lowrey, M. F. Cram and J. E. Crane.

Would it be practical for Vermont bee-keepers to establish headquarters for the purchase of supplies? Mr. Fassett said with headquarters we might get supplies much cheaper, but he thought bee-keepers were not organized sufficiently to do so at the present time. Mr. Lowrey said he was in favor of drawing as close together as possible, in purchasing supplies, and thought we could save quite a percent by buying in carload lots.

It was voted that we recognize and fully appreciate the effort of the Vermont State Board of Agriculture in behalf of the bee-keeping industry of our State.

M. F. Cram, *Sec.*

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.]

Answering and Asking Questions.

In sending in a batch of questions, a correspondent has sent one that I have concluded to take out of its regular setting and answer separately. He says:

"Dr. Miller:—Do you not get tired of answering questions about bees and bee-keeping? If any of the above questions are unimportant and not worthy of an answer, omit them; or, if you have answered them in the last five years refer me back, as I have the American Bee Journal covering that time.—Subscriber."

Seeing you've askt the question, I don't mind telling you that sometimes I do get tired. When a friend asks for some information that I happen to have, it's a real pleasure to give the information, but if one after another they keep asking questions all day long, it gets to be another thing. There's a difference, too, between answering some one sitting before me, of whom I can ask any explanations I like, and answering a question so worded that I can hardly tell what is really meant, but must answer somewhat in the dark. Sometimes questions are written in such penmanship that I may be obliged to puzzle a long time over some of the words. In some cases there's anxiety for fear the answers may be misleading. Then there are so many things that one doesn't know. If you want to get a realizing sense of your own ignorance as to matters apistical, just try for a time answering questions for a bee-journal.

But there's a bright side to the case. I have very distinct remembrance of the time when so many questions were coming up constantly, and I would have given a good deal for a chance to receive replies as to things that might seem very simple to one of more experience. So it's no small pleasure to know that I'm helping to throw some light on the path I have already trod and which others are now treading. Of course I couldn't make so much of a business of answering questions without being paid for it, but if there were connected with it no thought of helping others it would be a somewhat irksome task. Sometimes, too, there comes a very pleasant word of recognition of help received from my answers, and a word of that kind is fully appreciated.

Once in a great while I receive a word of a different kind. Not long ago I had a letter from a man who was not entirely satisfied with an answer I gave, and in the course of his letter he said:

"Of course no one ever did ask the question. I was speaking about this 'question' matter with a bee-keeper the other day. He said: 'Do you really suppose any one ever asks such foolish questions as are found in the bee-papers?' You can guess what my reply was."

I smiled when I read that. It would probably trouble any one person to get up such a variety of questions. Neither is it necessary. The only trouble is to find room for all that come. The worst spell of questions in the history of this Journal occurred

somewhat more than a year ago. For some time questions rained down in such lively style that this department overflowed the page to which it was legitimately entitled, finally being satisfied with nothing less than two pages. Then came a flood, and beginning with the number for Feb. 28, smaller type was used to crowd as much as possible on two pages. In spite of that the work began to get behind, and only by continuing the fine print for 11 numbers was the work caught up with, and with the month of May matters returned to their normal course and the usual type was again used. No doubt, when the editor was struggling so hard to get all the matter in, he would have been somewhat amused at the suggestion that some one was making up questions; but the suggestion would be no more true at the present time.

The correspondent first quoted says I may refer to answers given any time in the past five years. That might do in his case, but would hardly do in general; for I may not know how long the inquirer has been taking the paper, and, moreover, if *he* should not be able to find in back numbers just what might fit his case, it isn't at all certain *I* should be able to do so. It is difficult, however, to keep down a discouraged feeling when a question comes that is fully explained in any good text-book on bee-keeping. There are plenty of questions left after one has become familiar with his text-book.

Side-Entrance Hives—Self-Hivers.

1. It is more convenient for me to use hives with side-entrances. Do the bees do as well in such hives as with end-entrances? If they do, why is the entrance almost always in the end of the hive?

2. In using the Pratt self-hiver, is it any practical hindrance to the workers while gathering honey? Is it practical?

OKLAHOMA TERRITORY.

ANSWERS.—1. In this country it is the almost universal custom to have the ends of the frame running toward the entrance, mainly because it is supposed to be better for ventilation, and because the bees can go more directly to any one of the frames. If it's a matter of serious inconvenience to you to have them thus, the difference is probably not sufficient to have them the other way.

2. I've had no experience. Perhaps some one else can tell.

Getting Swarms—Eggs in Queen-Cells.

1. I have 11 colonies of bees, and would like to get all the swarms I can by June 1. I have combs with sealed honey saved from last fall. How can I manage to get a good many swarms by that time?

2. How long after the first swarm will the second swarm issue? also, how long after the second swarm will the third issue?

3. How do the eggs get into queen-cells? WISCONSIN.

ANSWERS.—1. Be sure that the bees have stores and to spare. See that there are no cracks or holes thru which heat can escape from the hives. When a swarm issues, some advise putting the swarm on the old stand and putting the old hive in the place of another strong colony, setting the latter in a new place. In a week or so a second swarm will issue, when the same old hive is to be put in place of another strong colony, and so on as long as swarms issue.

2. A second swarm is likely to issue about eight days after the prime swarm, but may be a little earlier or later.

3. Probably the queen lays them there.

Having Hives in Pairs in the Apiary.

You stated somewhere in some paper that you placed two hives as close to each other as you could and not have them touch, so I thought I would make a double hive-stand. I made it much like the single hive-stand shown in my bee-supply catalog. The front and back pieces are long enough for two hives with a strip from front to rear between the hives 3½ inches wide.

The strip is to keep down the grass between the hives and to help to place the hives true on the stand. Last year I used 55 stands of this description. Soon after putting the bees out of the cellar (March 7), I saw the bees from one colony crossing the strip between the hives and enter the other hive without opposition. I lookt thru the visiting colony and found them queenless. In working among the bees I found four or five cases of the same kind, that is, queenless bees visiting the neighboring hive. These were all the queenless cases found in the spring.

I placed my bees in this yard in the spring of 1888 for the first time, having bought the place the fall before. There was not a tree in it until I planted them in the spring. The stands are 8 feet apart one way and 10 feet the other. I kept my bees all summer just about as you see them in the picture I send you, except in rare cases I used a shade-board. When the temperature was 90 degrees the bees began to cluster out, and in several cases the bees from both hives clustered together. This worried me for a time, but I have failed to notice any harm coming from it.

One end of the front of the stand is black and the other is white. The stand is kept level much easier than the single one, on account of its greater length. You will see how much clustering out was done, as this view was taken on a hot day in September.

I am of the opinion that young queens often entered the wrong hive, as I lost quite a number during the summer. I understand all the losses cannot be charged to having hives in pairs, yet that and the regularity of the rows are somewhat to be blamed. I have left out one row of hives in the center which makes the central rows 16 feet apart in the rows. I am thinking of taking the central row out of each section of the yard, which will make five divisions instead of two, the hives removed making the fifth.

If you think my hives are far enough apart for safety to the queens and bees, will you kindly let me know, as they are much more easily cared for as they are.

It appeared to me that the central colonies were much weaker than those on the outside.

I want to thank you for kindly consenting to correct the statement in regard to granulation of honey. It is quite apparent that there is quite a difference in the character of honey gathered from like flowers in different localities. NEBRASKA.

ANSWER.—Allow me to congratulate you in the first place on the neat appearance of your apiary. I think it never struck me before that an apiary is improved in *looks* by having the hives in pairs.

If I ever said that hives should be as close as possible without touching (and quite likely I did) I hereby take it back. I prefer to have them about four inches apart. Your 3½ inches will do nicely.

The only grave charge, I think, that can be laid to having two hives on the same stand is the fact that under certain circumstances a queenless colony will unite with another. I think this will not happen in the summer if a colony becomes queenless in the ordinary course of affairs, as after swarming; but if you take away suddenly the queen, or if you take away all the brood and combs, there is danger sometimes of uniting. It may also happen in the spring when bees are first put out of the cellar. At such a time I'm not sure that anything better could happen, and it is so rarely that uniting occurs at any other time than in the spring that I have never considered it a serious matter.

I have never taken the precaution to have one end of the stand differ in color from the other, but it can do no harm, and may do some good.

The clustering together of two colonies side by side is a common thing when hanging out, but, like you, I've never seen any harm from it, and I don't believe any harm ever happens.

With regard to queens being lost on returning from the wedding-flight, I am very positive that putting the hives in pairs is not responsible for that, but, on the contrary, that there is much less danger of loss than if the same ground is occupied with the same hives placed singly at equal distances. Suppose on a treeless plain with no surrounding objects by which the bees can mark their location, you have a straight row of hives with a space of four feet between each two hives. A young queen can get into the wrong hive by going four feet out of her way. Now move each alternate hive so they stand in pairs, with eight feet between the pairs. A queen will go into the wrong hive only by going eight feet out of its way. That makes the chance of going wrong only half as much as it was when the hives were placed singly.

I think I hear some one say, "But the queen can get into the wrong hive by going out of her way only a few inches into the other hive of the pair." Listen. Bees don't make mistakes of that kind. Try this: In the spring close the entrance to a hive all but three inches at one end. When the bees are accustomed to that, so that each bee on returning to the hive goes straight to the part of the entrance that is open, change the place of entrance to the other end, closing up the end that has been open and leaving open three inches at the other end. If you never tried it before, you will be surprised to find what difficulty the bees will have in finding their entrance. I formerly kept two colonies in one 10-frame hive, a division-board in the middle, the entrances separated at the front six or eight inches. I have had many colonies in that way, and had many queens fertilized in them, and I think there was less mixing than with colonies in separate hives.

Suppose 30 colonies in a straight row in pairs, eight feet between the pairs. A worker or a young queen flies out from No. 15, the hives facing east and the numbers running south. If she makes any mistake at all, she is more likely to go into No. 13 or No. 17 than to go into No. 16, the other hive on the same stand. For she has markt the right hand hive, and there's no danger of her going into the left hand hive, but some danger that she may go into the right hand hive of an adjoining pair.

If there were no other advantage in having the hives in pairs than the one of having bees more easily find their own hives, I should consider that advantage very far outweighs the disadvantage of the few occasional cases in which a queenless colony may unite with its neighbor.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 60 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. APRIL 27, 1899. NO. 17.

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

IF.

If we noticed little pleasures
As we notice little pains;
If we quite forget our losses
And remembered all our gains;
If we lookt for people's virtues
And their faults refused to see,
What a comfortable, happy,
Cheerful place this world would be.

—Farm Journal.

Following the Leaders.—Mr. F. L. Thompson has this sentence in the April Progressive Bee-Keeper:

"Sad experience has taught me that, all things considered, it is not the best policy to follow the leaders; but to cultivate an independent judgment in the matters which touch the pocket-book."

Well, that's a little tough on some of us beginners, if we can't take any advantage of the experience of those who have gone before, but must blaze our own way thru the forest, whenever the pocket-book is to be considered. As Mr. Thompson is one of the leaders, some will probably make a near application of his teaching by not following his present advice.

The Philadelphia Convention Rates.—It seems the railroad companies have already arranged the matter of rates for the Grand Army to Philadelphia in September. And that means the rates are also settled for the annual convention of the United States Bee-Keepers' Association. The following paragraphs are taken from the Chicago Record for April 14:

For the national encampment of the Grand Army of the Republic, to be held at Philadelphia Sept. 4 to 9, the Eastern roads yesterday agreed to make a rate of one fare for the round trip from Chicago and all points in the Central Passenger Association territory. The same rate will be made over all lines, standard and differential alike. It was also agreed that the Philadelphia rates should apply to New York. In addition, the lines running out of Philadelphia and Washington are arranging to make reduced rates for side trips to Richmond and Fredericksburg, and to the battlefields of Virginia.

Tickets will be placed on sale Sept. 1 to 4, inclusive, good for return up to Sept. 12. By depositing ticket with the joint agent of the lines at Philadelphia, and payment of a fee of 50 cents, the return limit can be extended up to Sept. 30. Liberal concessions in the way of stopovers have been made. Ordinary tickets will permit of one stopover in each direction in the territory east of Pittsburg and Buffalo. Upon payment of an additional $2 another stopover in each direction will also be permitted.

The travel to the national encampment promises to be very heavy this year. The general public is expected to embrace the opportunity of visiting the seashore in September in large numbers. The roads are already "hustling" for business, and the gathering will probably be one of the best-attended in the history of the Grand Army.

We hope that the gathering of bee-keepers in Philadelphia will be one of the largest ever known in this country. Never, likely, will railroad rates be any lower than one fare for the round trip. It is yet over four months until the convention. Let all who can possibly do so make their plans to be there, all being well.

The Honey Prospects in Southern California.—Prof. Cook wrote us as follows April 10:

The rains have come, and we shall have a fine hay and grain crop. Will we have any honey? I think that remains to be seen. We have had far less rain than is usually supposed necessary to secure a honey crop. Yet we need more observation. It may be it has come at just the right time. Last year we had about the same rainfall as this, yet no hay crop. I find the flowers buncht this season. The black sage and other bloom are out two months earlier than usual. It may be that we shall have more and copious rains yet. In fact, a storm is now brewing. It may be that the rains will be so well timed that we shall have a honey crop even with less than the usual rain. Several of our best apiarists are moving their bees to the alfalfa regions of central California. A. J. COOK.

Getting Farmers to Keep Bees.—Occasionally there arises some one who in no uncertain words deplores the idea of getting all the farmers and fruit-growers to keep bees. But Mr. J. H. Tichenor, of Crawford Co., Wis., believes in the opposite view, and expresses himself as follows on the subject, giving reasons for the faith that he holds:

"What shall it profit a man if he gain the whole world and lose his own soul?" This is, in my opinion, just what we as bee-keepers are doing when we try to keep our farmer brethren out of the bee-business. Let me give you some reasons why it will pay us to induce our farmer neighbors to keep a few bees:

1st. Farmers are learning that they must spray their fruit-trees, and in so doing are slaughtering bees by the wholesale. Now, if every other farmer owned one colony each, just a hint to them that they might kill all of *their* bees would be sufficient to prevent this evil.

2nd. It would be no trouble to get them to subscribe for our modern bee-literature, and thus learn that it requires some effort on our part to produce a paying crop of first-class honey. And they would appreciate our efforts to produce *good* honey. No teacher is as good as experience.

3rd. They would learn to *like* honey, and so would consume more of it, thus advancing the price of a first-class article.

4th. The final outcome will be (I speak somewhat from experience) not more than one out of ten will ever make a

success of bee-keeping (thus no more honey produced), but each one, having acquired a taste for honey, will never again be found without honey on his table (thus much more consumed). And they will all say, "I see now that you people earn your money, and that dollars don't roll uphill to you without effort on your part, as I once believed they did."

Now, I honestly think that this is a fair probability of results; and having cleared my conscience of what seemed to me a duty, I submit the foregoing.

J. H. TICHENOR.

We think Mr. Tichenor has advanced several good reasons why farmers should more generally keep bees. His views will doubtless help to strengthen Rev. E. T. Abbott in his belief along this line, as he (Mr. A.) has several times threatened to start a paper to be called "Farm Bee-Keeping." We very much doubt if such a paper would pay, tho we believe thoroly in the idea that it would be no detriment to anybody if each farmer would keep about five colonies of bees—at least enough to produce honey for his own home.

Barrel an Unsatisfactory Honey-Package.—A bee-keeper and honey-dealer to whom we have sold quite a good deal of honey in barrels the past few months, wrote us as follows lately:

"A barrel is a very unsatisfactory honey-package for the man that handles it in the last instance. Nineteen times out of 20 the barrel must be taken apart to get the honey out."

We have often wisht that those who put up their honey in barrels could be compelled to buy and handle such honey for awhile. After they had a little experience with the stuff leaking out, and a number of pounds soaking into the wood—all the loss, of course, to come out of their own pockets—we believe they would be done with putting honey into barrels or wood of any kind. Tin is the thing for a honey-package. In some instances a half-cent a pound more can be secured for honey in tin.

Mr. J. L. Hubbard, whose picture appears on the first page of this issue, until a few years ago lived in New Hampshire. He wrote us as follows some time since:

MY DEAR MR. YORK:—I received the first number of the American Bee Journal soon after its publication in 1861, and think I have had every number printed since then. They have been read and studied with much pleasure, and, I hope, profit. It has ever been a champion of the right and progressive in its ideas. At first it was supposed by some that the whole subject would soon be gone over, and that there would then be but little use for a bee-journal, but the subject seems to have been continually opening in new directions, and grows more interesting.

Besides teaching new ideas in bee-keeping a bee-journal is very useful to keep one posted in regard to the business in all parts of our country and the world.

In the earlier days of the Bee Journal my name was sometimes found in the reading and advertising columns, but of late years I have been doing but little in the bee-line, and am now sojourning among the mountains of western North Carolina.

The American Bee Journal has not lost vigor by age, but, if possible, grows more reliable. May it live long and prosper. J. L. HUBBARD.

Henderson Co., N. C.

An Illinois Pure Food Bill was past at the late session of the legislature. It was introduced by Senator Dunlap—one of the best men in the whole State. From an editorial in the Chicago Record of April 14, we take these paragraphs:

This measure is one of the important ones to be enacted at this session of the legislature. Illinois has been backward in pure-food legislation. The passage of this Bill means that a start at least is to be made in the direction of State supervision of food products offered for sale. Time will show what changes are necessary for the perfection of the law. It was not intended to be very far-reaching in its effect at the outset, but was designed by its framer, Senator Dunlap, to serve rather as the beginning-point for other pure-food legislation. It creates the machinery for food inspection, with the intention that the duties of the inspection officials will be gradually enlarged.

The Bill creates the office of State food commissioner, to be filled by appointment of the governor. The salary is $2,500 a year. The commissioner, with the consent of the governor, may appoint two assistant commissioners at a salary of $1,800 a year each, one of whom must be an expert in dairy matters, and the other a practical and analytical chemist. The commissioner is also authorized to appoint necessary inspectors, not exceeding six in number, the compensation of the inspectors to be $3 a day and expenses. It is made the duty of the commissioner to enforce laws now existing, or that may hereafter be enacted regarding the production, manufacture and sale of dairy products, or the adulteration of any article of food. The terms "food" and "adulteration" are defined, and the sale of articles adulterated within the meaning of the Act is forbidden under penalty. The Bill also makes regulations concerning vinegar, candy, fruits and vegetables, jellies and jams, extracts and chocolates and cocoas.

In order to give dealers time to prepare for the operation of the Act, the enforcement of penalties under it is suspended until July 1, 1900.

Our only regret is that the new law doesn't go into effect July 1, 1899, instead of a year later. But it is really encouraging to feel that we have such a law, and there is hope that in time we shall be able to make the adulteration road a hard one to travel.

Now, if a food commissioner who has more than a cotton string for a backbone is appointed, there will be just cause for hope that in a few years the consuming public will be reasonably sure of getting just what they pay for in the line of things to eat.

MR. E. L. CARRINGTON, of Florida, desired us to announce that he will not offer queens and bees for sale this year, as all his bees are dead or dying.

* * * * *

"TWO WORLDS" is the name of the $50 prize story begun in the Progressive Bee-Keeper for April. It was written by Mrs. J. M. Null. There were 17 contestants for the prize.

* * * * *

THE FARM JOURNAL is cream, not skim-milk, and just the paper for the man who keeps cows. We give it for the balance of 1899, and all of 1900, 1901, 1902 and 1903, nearly five years to every subscriber who accepts the offer on page 254. This is a short time offer, as we have only a small number of Farm Journal subscriptions on the terms offered.

* * * * *

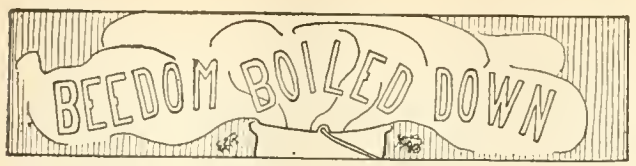
MESSRS. F. L. MURRAY AND F. P. WHITE, of Lafayette Co., Wis., called on us last week. Mr. Murray is the secretary of the Southwestern Wisconsin Bee-Keepers' Association. Mr. White's bees have wintered very well, but Mr. Murray lost quite a number of colonies. The latter has two apiaries. We hope soon to show pictures of the apiaries of both Mr. White and Mr. Murray.

* * * * *

SOMNAMBULIST, in the Progressive Bee-Keeper for April, has these congratulatory words to offer in reference to our new department, called "The Afterthought," in charge of that cogitating individual:

"Permit us to congratulate you, Friend York, on your new department, for all the Journal readers extend to it a most hearty welcome. But as to 'unreliable glasses' being strictly appropriate—well, one cannot help seeing a clash of arms between that word 'unreliable' and the matter following."

"Sommy" and "Cogy" ought to get acquainted. They'd make a fine team.



Consumption of Stores in Severe and Mild Winters.—In the severe winter of 1894-95, amount of stores consumed per colony from Nov. 1 to March 1 was 7.5 pounds, and 13.4 during the same time in the mild winter of 1897-98.

Fruit-Bloom Honey, Mr. Robertson thinks, is a bad thing to get mixt with light honey. He believes raspberry is as bad as fruit-bloom, and, altho not very dark, raspberry is about as poor flavored honey as there is.—Canadian Bee Journal.

Large Hives for Outdoor Wintering. In an apiary of 80 colonies, 50 in Quinby 11-frame hives and 30 in Langstroth 10-frame, only one in 25 died the past winter in the large hives, while one in three died in the Langstroth hives.—Chas. Dadant, in Gleanings.

Crimson Clover has for the fourth or fifth winter wintered beautifully in Medina Co., Ohio. Mr. Root sowed some last August in wheat that grew so rank it fell down. It looks fine this spring, except in some spots bare of wheat. It is of some consequence to learn in what localities it is, and is not, worth while for bee-keepers to sow crimson clover.

At what Stage Should Honey be Extracted? was a question discust at the "Meeting of the senate of Canadian bee-keepers." Mr. Holtermann thought it should be left till the honey has a glossy, shiny look in the cell. Mr. Robinson thought the longer left on the hive the better, so long as the weather is warm and dry. Mr. Shaver had had sealed honey become thinner when left on the hive, perhaps on account of rainy weather.—Canadian Bee Journal.

A Commission Man on Tall Sections.—H. Segelken, of Hildreth Bros. & Segelken, New York, tells something of the New York market in Gleanings, and thinks the 4¼ x 4¼ sections have had their day. He thinks the tall sections will drive them out in time, just as the one-pound section drove out the two-pound section. The size preferred is 4x5 x1⅜, without bee-ways, with a leaning toward something still narrower. The demand is for sections of 12 or 13 ounces. He favors selling honey, not by weight, but by the piece, and by the crate. "The demand for honey in paper boxes has fallen off somewhat for the past two seasons, and unglast has been in better demand than heretofore.

Strong Colonies for Results can hardly be repeated too often. In the Progressive bee-keeper R. C. Aikin says:

"Hold your forces together if you want surplus. Better take a few bees from each strong colony, and make nuclei, and ask nothing more of these, but to get in winter stores and make colonies for winter, and see that the parent colony gets you surplus."

Doolittle endorses this, but says if little increase is needed it is better to make no nuclei, but make strong colonies at once, by using a big funnel and nucleus-box and going from colony to colony till 7 to 10 pounds of bees are obtained, then giving a queen. This keeps down swarming, and yet keeps all at work in the supers.

Colorado Grading of Honey.—F. L. Thompson reports in the Bee-Keepers' Review the system of grading comb honey adopted by the Colorado Association, and a very fine half-tone picture shows six sections of each of the two grades. The grades are as follows:

"No. 1.—Sections to be well filled; honey and comb white; comb not to project beyond wood; wood to be well cleaned; sections to weigh not less than 21 pounds net, per case of 24 sections; but cases in lots must average 22 pounds net. (That is, if a few cases in a lot weighed 21 pounds each, that would not prevent the whole lot from being first grade honey, provided the average of the whole lot was 22 pounds.)

"No. 2.—Includes all amber honey, and all white honey not included in No. 1; to be fairly well sealed, and not weigh less than 18 pounds net per case of 24 sections.

"CULLS.—All cull honey shall be sold in the home market."

One might ask why cull honey should be inflicted on the home market if not fit for shipping. The reason given is a very commendable one: On account of the use that may be made of them to be cut up into strips to have glucose poured over them. Cull honey is not defined.

One of the hardest things for an outsider to see thru is that matter of 21 and 22 pounds. If a lot averages 22 pounds per case, and a 21-pound case is added, then a 23-pound case must be added to balance it. When it comes to selling out by the single case to the grocer, each 21-pound case is first-class, then why would not a whole lot of the same kind grade just as high? But it may be that demands of grocers in the same market may vary.

It is a very much easier thing to find fault with a system of grading than to evolve a faultless one.

Increase by Nuclei.—Remove or cage the queen. Ten days later take two frames of brood with adhering bees, put in an empty hive at one side, using a full comb of honey as a division-board. Stuff the entrance with green moss, grass, or leaves, packing it in very tight, so not a bee can get out. See that at least one good queen-cell is in each nucleus. In two to five days the bees will gnaw a way out, and not a bee will go back to the old place. Each strong colony should make four or five good divisions, that will become good colonies in 40 or 50 days. Enlarge the entrance when the bees gnaw out. The old queen, if good, may be freed in the hive on the old stand without fastening in the nucleus.—W. W. Somerford, in Gleanings.

Parthenogenesis—as in the case of perfect male bees being produced from unfertilized eggs—seems a thing somewhat difficult of belief to some people. Stranger things, however, occur among other classes. The aphis, or common plant-louse, is only to be seen in the perfect winged form in the fall. After mating, the female lays eggs in the recesses of plants, these eggs hatching the next spring, but producing only wingless lice. Without mating, these wingless lice bring forth other wingless females, not hatcht from eggs, *but born alive*, and these in their turn bring forth others, so that they often extend to nine or ten successive generations, until the last brood brings forth males and females with wings, and from these come the fertilized eggs in readiness for the following spring.

"Face the Hives South," says Somnambulist, in the Progressive Bee-Keeper, endorsing Doolittle, "giving them the advantage of more frequent cleansing flights during a severe winter, and lengthening not only the season, but the separate days which constitute the season;" advising that the apiary be placed where the general lay of the whole country is to the south, as the southern slopes warm up sooner and blossoms appear there in advance. That raises the question whether Sommy, who always dreams so brightly, must not have been in an abnormal condition when penning that. Wouldn't an apiary with a northern slope get those southern-slope flowers all right? Or is the slope to be continuous as far as the bee flies? As to the general question of north or south facing, or facing some other direction, Cogitator probably has it about right—"whole thing a matter of climate."

Sections Without Separators.—W. B. Ranson reports in Gleanings that without separators he secures sections with only 21 in a thousand bulged. His chief dependence is upon very strong colonies, with hives carefully leveled. He encourages early brood-rearing, and, when the colony swarms, removes the queen and lets the swarm return. In eight or ten days they swarm with the virgin queen. He removes the old hive and puts the new in its place with perforated zinc at the entrance, running the swarm into the new hive, and allowing only the best young queen to go in. On the hive is put an excluder, over this a super of sections, with starters, and on this the super of unfinisht sections from the parent. Then the bees from the old hive are brusht into the new, the old hive closed with wire-cloth, put in a comfortable place, and in 24 or 48 hours the bees again brusht out into the new hive, and the third day the excluder removed from the entrance. That makes a powerful colony with no danger of swarming again, and work goes on so strongly in the sections that no separators are needed.

Root's Column

WE WANT every reader of this paper to send at once for a sample copy of GLEANINGS IN BEE-CULTURE. See some of our offers below.

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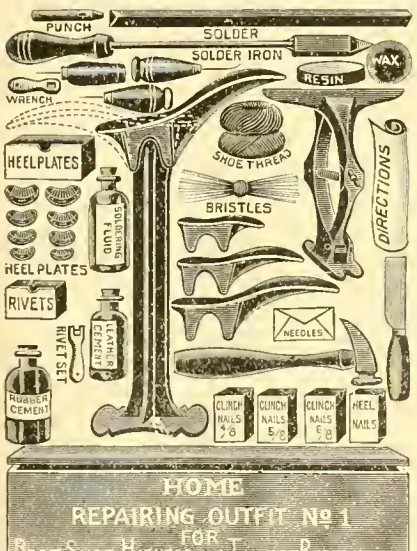
GLEANINGS ONE YEAR, and one untested Italian Queen, for $1.00 only. We begin mailing these Queens in June, and orders are filled in rotation, so the sooner your order comes, the earlier you will get the Queen.



GLEANINGS ONE YEAR, and No. 1 Repairing Outfit. Price of this combination only $1.75. We can ship these outfits from Syracuse, N. Y., Mechanic Falls, Maine, Medina, O., or Des Moines, Iowa, so the freight will be low.

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LAST OF ALL, if you don't want any of these Clubbing Offers, send us 50 cents for GLEANINGS the remainder of the year.

The A. I. Root Company
MEDINA, OHIO.

GENERAL ITEMS

Bees Doing Nicely.

Our bees are doing nicely. We started last spring with 4 colonies, and increast to 10; several went away. Honey here is principally gathered from alfalfa, and it is nice; heart's-ease is next. We took 400 pounds of comb honey, all in one-pound sections. We always leave them some in the super; I lookt to-day and found some out of food, and gave them more. I love to work with them. MRS. M. J. BEVINGTON.
Jewell Co., Kan., April 15.

Very Backward Spring.

We are having a very cool, backward spring, the thermometer registering 31 degrees yesterday morning. The fruit-crop in this section will be a total failure, and box-hive bee-keepers will lose very heavily. Last June and July the honey-flow was good, and they (the box-hive men) robbed about July 20; the fall was very wet, so that no honey was gathered after July, and their bees are now destitute of stores, and unless the weather changes right away to warm and fair, the loss will be heavy.

This spring is the fourth cool and backward one. I wonder if it will never change. The June and July flow, lasting from 40 to 60 days, rarely ever fails, and the man whose bees are in good condition the first of June is reasonably sure of a crop every year. J. M. CUTTS.
Montgomery Co., Ala., April 10.

Hard Winter on Bees.

It has been a hard winter on bees in this part of Iowa. Almost all died that were left on the summer stands without protection. I put 150 colonies into the cellar last fall, and took them out April 11; they were all alive, tho some of them were weak and the hives spotted badly.
CHARLES BLACKBURN.
Buchauan Co., Iowa, April 15.

Turpentine for Stings, Etc.

Rain or no rain, my bees are piling in honey from orange-bloom, which has been on about two weeks, and will last a week or 10 days yet. Then alfalfa will begin to bloom (there being hundreds of acres along the Riverside canal.) Of course I do not expect to get any orange honey, for the hives were nearly empty to start with, but the bees will store for themselves some of the best honey the world produces.

Tell those who are anxious for an antidote for bee-poison, to try spirits of turpentine. Scrape off the sting and apply the turpentine at once, and no itching or swelling will be the result. H. M. JAMESON.
Riverside Co., Calif., April 11.

Sorghum-Making and Bees.

I saw a solicitation last fall in the Bee Journal asking some one to give experience on sorghum-making. I had an experience last fall which was very dear to me. I raised quite a quantity of cane last summer, and in the fall—as is the custom in this country, and I suppose in all other countries where they raise the "stuff"—I undertook to make the molasses, just at a season when there was no bloom for the bees to work on—rather earlier than common, just before the wild aster came into bloom.

We began to grind out the juice, and such another time you never saw! Instead of grinding "cane," as it is called, we were grinding bees. It did not stop here. When we began to boil the juice we began to boil the bees, and oh, my! you never saw such a mess.

I kept on this way a day or so, until the

SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.
Add 25 cents to your order, for cartage, if wanted by freight.
Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**
Thousands in successful operation. Lowest priced 1st-class hatcher made
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It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc. The man who already has a wagon may have one of these low handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., Box 1b, Quincy, Illinois, for their catalogue, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.

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The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

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7Dtf Please mention the Bee Journal.

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100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. Fifty varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE.
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ARE MODELS OF PERFECTION.

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SILVER GRAY CARNIOLAN —QUEENS—
—ALSO THE—
Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.
9A26t **J. D. GIVENS, LISBON, TEX.**

PAGE

IF YOUR COAT FADES
you bought the **wrong kind.** If your wire fence "looks like a fish net," you didn't buy **The Page,** or else your posts have given away.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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WANTED TO BUY A CARLOAD OF BEES
10-frame Hives and Hoffman Frames preferred.
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EGGS FOR SITTING Pure-bred Barred Plymouth Rock, 15 Eggs for $1.00.

Superior Rose Comb Black Bantam Eggs, 15 for $2.00. No other varieties kept.

Italian-bee keepers being men of good taste and sound judgment should beep the best and most profitable kinds of Poultry. Only fresh eggs used, carefully packt and sent by express. Safe delivery guaranteed. **D. S. HEFFRON, WASHINGTON HEIGHTS, ILL.** 13Atf
Please mention Bee Journal when writing.

bees literally besieged the works, worse than the Spaniards at Santiago. I began to reconnoiter the apiary, to devise some plan whereby I could get some advantage of the bees, if possible, but all to no purpose—they outwitted me.

So the next thing was to devise some plan to keep them in the hives, if possible. I got slats (the bottom pieces to Langstroth frames), and took a small nail and tackt it on the mouth or entrance of the hives, in the morning, before the bees were "up," leaving, as I thought, space enough for them to get air, and went to my work again, thinking I had struck a bonanza. But along about noon the bees were storming the castle again by making another charge on the mill. I stood them as long as I could, which was about 3 o'clock in the evening. By this time I was getting "hot" again, and said to myself, "I will keep you in next time."

When I went to the hives in the evening I found the honey running out of the hives in torrents. I hastily took the strips off, and found five of the best colonies just as dead and as wilted as if I had held them over the fire. Suffice to say, I will never try it again.

No bee-keeper should "monkey" with cane-raising. I had one queen I had imported from Italy which I examined hastily, and found it all right, and was truly glad it was no worse than it was. The bees crowded in the space I had left, and shut off all the air, and you would readily know the consequence. I lost 5 out of 50 colonies.

JOSEPH A. PIERSON.

Braxton Co., W. Va., April 3.

Bees in Fine Condition, Etc.

Bees wintered well in this locality as far as I know. I put 64 colonies into the cellar Nov. 22, and took them out about the first of March. I took 60 out alive, and they are in fine condition at present. I tried outdoor wintering on a small scale, and lost 5

FOR SALE.

Fifty (50) colonies of ITALIAN BEES in standard Langstroth hives in good condition. Will sell five (5) colonies, or the lot, at $3.00 per colony. Also one Given Foundation Press, and one Cowan Honey-Extractor. For further particulars inquire of

14A t **MRS. J. W. LeROY, Rio, Wis.**
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BEES QUEENS Smokers, Sections, Comb Foundation And all Apiarian Supplies cheap. Send for FREE Catalogue. **E. T. FLANAGAN, Belleville, Ill.**
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THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.
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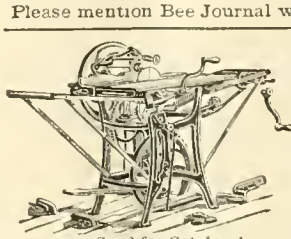

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It possesses so many points of superiority that every farmer should demand its use when he has his grain threshed. Combines all the points of the apron and vibrator principles. It threshes fast enough to suit the thresherman. It threshes clean enough to suit the farmer. Catalogue of Rumeley Threshing Machinery, Engines, Horse Powers, Saw Mills, etc., FREE.

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Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address

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17A17t FREMONT, Newaygo Co., MICH.

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500 GOOD LANGSTROTH BROOD-COMBS For Sale at 7 cents each. Address ARTHUR STANLEY, Box 460, DIXON, ILL.

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us, as we are anxious to place our prices and goods before the bee-keepers of the Northwest. Most of our stock is

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Standard Lumber Co.

10Atf MANKATO, MINN.

Please mention Bee Journal when writing.

out of 9 colonies, and those 4 that are left aren't of much account. I prefer cellar-wintering, every time.

We have had some awfully cold weather this winter, and no snow. It is quite likely the clover is frozen. I have examined several stalks of Alsike clover, and it looks as if it were frozen. Bees have done nothing so far here (March 28). I saw them work on soft maple March 14 three or four years ago, but we generally get good weather for bees about April 1st. So far we have had no sign of spring. We had about three inches of snow yesterday, and the ground looks as bare as it was in January.

Eight years ago, when I started in bee-keeping, the farmers around here always sowed red clover on lowland, and then they would claim that they could not raise clover. This set me to thinking how I could help my neighbors, and at the same time help myself. So I bought a lot of Alsike clover seed, and got some of my neighbors to try it, and I tried some of it myself on some of the wettest land that we had. This land was too wet for timothy, and this clover has not failed to produce a crop. Some years ago we had such a wet season that some of the land was under water six weeks, and this was in the summer (May and June), and this clover was all right when the water was gone, and we made hay from that land in July.

There is another point that I find that farmers don't seem to understand very well, and that is, the fertilization of plants. There are not enough bumble-bees to fertilize the red clover, while the honey-bee works on the Alsike clover. It is this working by the bees that makes it yield seed the first and second crops, and it is those two crops of seed every year that keeps up a good stand when we have cold and wet weather, when apple, plum, raspberry, and all other fruits are in bloom so the bees cannot work on the bloom. We generally don't get much fruit, still there are some people that think bees are a nuisance, but they don't think that nice fruit which the bees have helpt them to get is a nuisance.

My last year's honey crop was about 400 gallons, which I sold long before the new year arrived. I have over 60 colonies that I am going to run for extracted honey, because I can sell that the best. I am going into the bees a little heavier in the future, because I have found some one that is willing to help me—a loving wife. (There ought always to be two to keep bees rightly!)

The American Bee Journal ought to be taken by every man and woman that keeps bees.

I am of the opinion that honey-dew is produced by insects in this part of the country. I have seen just as clear stuff as water on the leaves of common hedge, and on examination I could find the insects. Last spring our plum trees were just alive with insects, and I found my bees working on the leaves of those trees. The stuff was dark in color. Later in the summer I found the bees working on acorns, and on examination I found a grub in each one of them. This stuff lookt like pine tar, and was not fit to eat. JACOB WIRTH.

Henry Co., Ill., March 31.

That Tired Feeling!

These are our stretching days. We yawn and groan and twist ourselves with threatening danger to our backbone and the general anatomy! Why? Because spring has come, and Nature is making startling efforts to loosen our joints into greater activity, as the buds are pusht out for their fruitful mission.

The winter's cold has, in a manner, shriveled us, as all things else with life, and now the warm sun and balmy air have come to loosen our joints, to clear the brain, to stir the blood for the greater activities that await us from now until the mercury shall again contract into its little round receptacle at the lower end of the thermometer, which has patiently stood outside, thru the vicissitude of all weather, to remind us of the frequent and varied changes, from tor-

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Buggies $35 and Up.

"WINNER" TOP BUGGY $35.00

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Surries, Phaetons, Buggies, Spring Wagons and Road Wagons. Our vehicles excel in quality of stock, material, workmanship, finish and style. We make every vehicle we advertise. In Single and Double Harness everything you could wish. An excellent single Harness as low as $4.80. Illustrated catalogue sent free. All prices marked in plain figures. Write at once. Address,

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Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

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Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor—in fact everything used by bee-keepers. Send for our Catalog.

C. H. W. WEBER,

2146 Central Ave., CINCINNATI, OHIO, Successor to CHAS. F. MUTH & SON and A. MUTH.

Honey and Beeswax Wanted.

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CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)
Cincinnati, Ohio, April 7, 1899. 15Atf

Don't Rent

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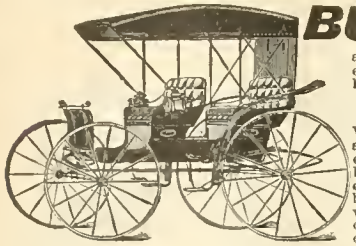
Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.



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and save all intermediate profits and expenses. Traveling men's expenses, agents' and dealers' commissions, losses on bad accounts, etc.

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FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf AUGUST WEISS, Hortonville, Wis.

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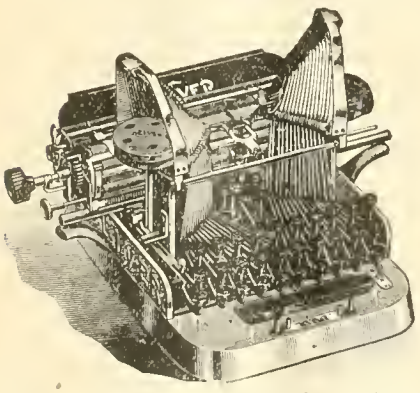
Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in **America.** We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. **INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.**

The Oliver Typewriter.

IT TOOK 25 YEARS to find out that typewriters have been built up-side-down. The OLIVER is built right-side up, where the WORK IS IN SIGHT.

THE OLIVER IS POPULAR because it is an up-to-date typewriter, not in the Trust, and because it SHOWS EVERY WORD AS YOU WRITE IT.



IN USE BY

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RECORD, Chicago.
TIMES-HERALD, Chicago.
MONTGOMERY WARD & Co., Chicago.
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and countless other houses of like importance and character.

Send for Catalog.... **Oliver Typewriter Company,** N. E. Cor. Washington and Dearborn Sts. CHICAGO, ILL.

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rid heat to artic cold, as the seasons have come and gone. Then limber up the hinges and bring yourself into a happy frame of mind for the work that must be done—work that if intelligently accomplisht will prove our physical as well as financial blessing.

"Oh, but I feel sort of rheumaticky these days—can't spunk up like I used to, you know," says our elder Uncle Billy. Just so. I understand your feelings. The muscles have become infiltrated with a kind of poison termed "uric acid," which, from want of sufficient exertion to throw it off, makes the legs and arms and back stiff, lame and sore. But, say, Uncle Billy, you don't have to seek far for the best remedy which a kind Nature provides. Just look around for those early yellow dandelions—the bees'll take you right to 'em. Dig up a hatful of the roots and leaves and get mother to make you a gallon of good strong tea of them, and take a cupful each night and morning for a week or two—drink it hot, mind you—and see where all those pains and aches have gone to! Why, you'll feel like cutting the "pigeon wing" as in days of long ago.

Well, here's to you! DR. PEIRO.

2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

F. J. GUNZEL, Obear, Craighead Co., Ark.
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Comb Foundation

Wholesale and Retail.

Working Wax
INTO FOUNDATION FOR CASH A SPECIALTY.

Hives, Sections,
and a full line of SUPPLIES.

I sell the VERY BEST at lowest prices and ship promptly.

Send me your name for 1899 catalog and prices, whether you are a large or small consumer or dealer.

Beeswax always wanted for cash or trade at the highest price. Address,

GUS DITTMER, Augusta, Wis.

PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Beuna Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Connecticut.—The annual meeting of the Connecticut Bee-Keepers' Association will be held at the Capitol, at Hartford, May 3, 1899.
Waterbury, Conn. MRS. W. E. RILEY, Sec.

Colorado.—A joint meeting of the Colorado State Bee-Keepers' Association and the Denver Bee-Keepers' Association, will be held in room 33, second floor of the Capitol Building, in Denver, Wednesday, May 10, at 10 a.m. Amendments of the Constitution and By-Laws, and other important matters, will be brought up.
FRANK RAUCHFUSS, Sec.
Denver, Colo. (box 378).

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" " 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" " 1.00
Large	2½-in. stove.	Doz.	5.00;	" " .90
Plain	2-in. stove.	Doz.	4.75;	" " .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" " .60
Honey-Knife		Doz.	6.00;	" " .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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BEST GOODS AT FAIR PRICES.

And that's the secret of our immense trade that has made us

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For Bee-Keepers' Supplies. We are ready now for the season of 1899 with an immense stock of the latest and best in our line. Send for our 1899 catalog and discounts for early orders.

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OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 18.—Best grades of white, 13c; off in color, etc., 11@12c; light amber, 10@11c; dark amber and mixt buckwheat, 7@9c. Extracted, clover, 8c; other grades of white, 7@7½c; ambers and dark, 6@7c. Beeswax, 27c.

Sales are in a small way, as the time of year is with us which usually sees the close of active sales. Owing to the inclement weather which has cut off the early fruits and vegetables the honey market has benefited, so that all of the white comb is nearly disposed of. There is quite a quantity of dark and undesirable comb being offered. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey. M. H. HUNT.

NEW YORK, April 19.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat, 7@7½c. Extracted in good demand at unchanged prices. Beeswax quiet at 27c.

Our market is well cleaned up on comb honey. There is a fair demand, especially for white. HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, April 5.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6¾@7c. Beeswax, 26½@27c.

Beyond a small jobbing trade, mainly out of supplies in second hands, there is nothing to record in the way of business. There are only moderate supplies, and these are mainly comb. Values are steady. It is too early to get definite information concerning coming crop, but it is not likely to prove large in this State.

BOSTON, April 18.—Fancy white, 13c; No. 1, 11@12c; A No. 1, 10@11c; light amber, 9c. Extracted, stocks about cleaned up. Nominal price for white, 8c; for light amber, 7c. Beeswax, very light stocks; selling at 27@28c.

Naturally the demand for honey is gradually growing less, and altho stocks on hand are not large, still the demand is so small that the general feeling is weak and prices are being shaded in order to work off stocks. BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c. PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & Co.

BUFFALO, April 21.—Our market is cleaned up on fancy comb; more would bring about 12 cts. There are more or less very poor lots selling at 7@8 cents, at which quite a large amount can be sold. Extra fancy beeswax, 28@30c. BATTERSON & Co.

OMAHA, April 18.—There is but little stock left in dealers' hands now, and realizing that no further receipts can be expected until another crop gets into the market, it is held firm at 14c for fancy white comb. Extracted, 7½c. PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand. A. V. BISHOP & Co.

Nuclei of Bees For Sale.

We have arranged with a bee-keeper in Lee Co., Ill., about 100 miles west of Chicago, to fill orders for 3-frame Nuclei of Italian Bees, with Queens, at $2.75 each, or in lots of 5 Nuclei, with Queens, at $2.50 each. Orders can be filled about May 10 and after.

GEORGE W. YORK & CO.
118 Michigan Street, CHICAGO, ILL.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

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94 Dearborn Street, CHICAGO.

Headquarters of the Eclectic System.
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BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

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I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

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Portland Seed Co. ..... Portland, Oregon.	J. L. Gray ..... St. Cloud, Minn.
E. T. Abbott, ... St. Joseph, Mo.	Pierce Seed and Produce Co. ..... Pueblo, Colo.
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Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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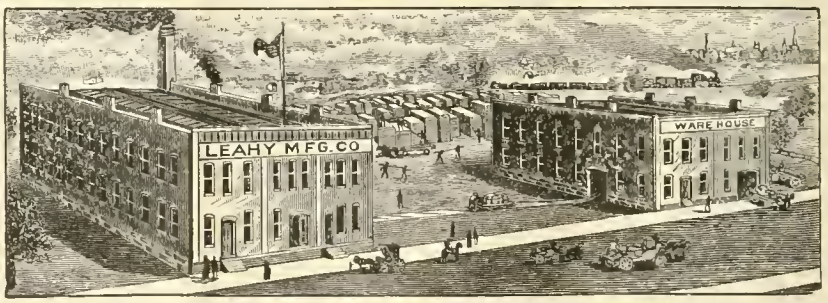


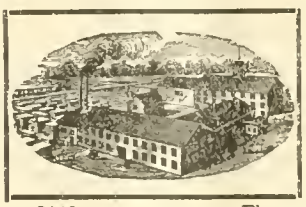
For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Eastern Bee-Keepers!

Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

BEES IN SEASON.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.



BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

We also manufacture Tanks of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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Please mention the Bee Journal when writing Advertisers.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MAY 4, 1899. No. 18.

CONTRIBUTED ARTICLES

Bees and Honey in Utah—Alfalfa.

BY E. S. LOVESY.

THE honey crop here for last season may be considered closed up, and while the figures in the early part of the season were not very high, the demand has been good—in fact, it has been impossible to supply the demand. I do not think there is 500 pounds of comb honey left in the State.

Our State as a honey-producer has been pretty well advertised of late, and consumers and dealers are beginning to find out that Utah alfalfa and white clover honeys are par excellence. Of course, success in obtaining a yield of honey in paying quantities is largely a matter of conditions: it sometimes happens that if one or more bee-keepers by proper management make a success, others think it is an easy way to make money, and they rush so many bees into the neighborhood as to swamp the whole business. By all means this should be avoided. While I might name several instances of the kind here, I will point only to one.

In 1897 one bee-keeper reported a yield of over 300 pounds per colony, spring count; but last season so many bees were brought into the locality that his surplus was reduced to less than 50 pounds, while a number of the new colonies brought in came out in the fall with several pounds less than nothing; that is, there were less bees and honey than they had in the spring.

One thing that some bee-keepers don't seem to realize is, that if their bees are not strong enough to rush forward they often dwindle just as fast backward. But this is not written with any intention to discourage anybody, but rather with a view to advise our bee-keepers to use wisdom in selecting a location for an apiary. If they do this it may prove a benefit to themselves without injuring their fellow bee-keepers.

We had a somewhat peculiar season here the past year. It was short at both ends. In some portions of the State the spring was cold and backward; thus the bees failed to build up as early as usual, but when it did clear up it did so for good, and the flow from alfalfa—our main honey-plant—where there was plenty of irrigation water, was all right; and while some very poor yields were reported, some large yields were also noted, the largest being 10,800 pounds from 31 colonies, spring count, and an increase to 82 colonies. This, of course, is an unusual report, but all in all I believe the bee-industry is in as flourishing a condition as any of the other industries of the State; and if the bee-keepers were only united, and would pull together for their own interest, they would accomplish better results.

We have perhaps one or the best laws in existence for the protection of our bees, and while the law has been enforced in many of the counties for the benefit of the industry, still there has been some trouble and considerable loss in a few localities thru a lack of interest on the part of the bee-keepers to get it enforced. But we find that instances of this kind have been an incentive to arouse the bee-keepers to action. It is hoped that our bee-keepers will interest themselves not only in this matter, but also in the purchasing of supplies and in the disposal of their products.

ALFALFA GROWING IN UTAH.

I have received several letters of inquiry in regard to alfalfa, but I do not think that an extended article on it is necessary at this time, as it has been pretty thoroly written up in the American Bee Journal; therefore I would say for

the information of those wishing to try this plant, that it should be sown as early in the spring as possible, so that it may receive the benefit of the spring rains. It is sometimes sown alone here, and sometimes with grain crops; in the latter case I would sow about 23 or 24 pounds of seed to the acre, but if sown alone about 18 or 20 pounds is enough. Where it will produce honey, as a rule, it will be of a superior quality, and while as a rule we regard it as our best honey-plant, in a rainy climate it cannot be relied upon as a honey-plant at all, because, like sweet clover and some other plants, the rain washes the nectar out of the blossoms. But we believe that any place where it will grow it is one of the best forage plants known, and it will produce the most to the acre.

Of all Utah crops, alfalfa (or lucern, as it is called here), we think, is the "boss." Good land will produce about seven tons to the acre, and I know of land where over 200 tons from the acre have been cut since it was first planted, about 30 years ago. Almost any animal that can be named will live and thrive on it, either in its green or dry state, and all stock will eat it in preference to any other hay. I have just been buying a lot of honey-jars packt in clean meadow hay from Illinois, which I tried to save by feeding, but after starving the horses for 36 hours they would not touch it. I then mixt lucern with it, and they pickt out every spear, but left the Illinois grass.

WINTERING BEES IN UTAH.

As a rule, the principal cause of winter loss among the bees in this part of the country is a lack of ventilation. Our bee-keepers, in their anxiety to protect their bees from the cold weather, cover them up and make them so nearly air-tight that it causes the bees to sweat. Then the little air they may have in the hive, when the temperature drops low, becomes foul, which causes the bees to become so weak that they cannot leave the cluster to seek their stores, and thus they hang in the cluster until they starve; when the bee-keeper opens his hives he finds the frames damp and moldy, and his bees dead. I could give over a hundred illustrations to prove this.

Packing is all right if the bees are kept dry. Remember, they must be kept dry. Bees don't often freeze, but they can be easily smothered, and starve. Thus it would be preferable to prop up one end of the cover rather than to seal them down air-tight.

I believe there was four times the amount of snow in Salt Lake county the past winter as in the previous one. Many of the tall pines in the canyons of the Wasatch Mountains were covered out of sight; there were many slides with some fatal results, and while a few of our stockmen felt a little blue, the farmers and bee-keepers felt jubilant, as it insured an abundance of water for irrigation, and a good flow of honey. Salt Lake Co., Utah.

Observations on the Subject of Honey-Dew.

BY WM. M. WHITNEY.

PROF. A. J. COOK, in his article on page 17, under the head of "Honey-Dew—Its Origin and Uses," asks the readers of the American Bee Journal to observe closely this honey-dew, and report the result of their observations.

It has been my habit to observe somewhat closely the production of honey-dew for years, before becoming interested in bees. But I have never known an instance of its production that has not been the result of insect life. I am not sufficiently verst in entomology to be able to definitely classify the different species which produce this kind of honey; but from my observation during last summer, I concluded there were in this vicinity at least two classes or species of aphides at work. To make myself understood clearly, I will be compelled to give a history of my operations in this direction.

The early spring bid fair for a successful season, and on May 13 I put extracting-supers on several hives, and section-cases on others, but soon the conditions changed to such a degree that for some time little was done except to build up strong colonies, which fact I discovered by frequent examinations. This condition continued thru the early white clover and the basswood season, and except for the hope of a supply from sweet clover, our fond anticipations had vanisht; but on July 27th, after a respite of ten days, I made another examination, and, to my surprise, I found several of the section-cases partly filled, and quite a number of supers nearly full of honey. The most of it, however, was the vilest looking stuff one ever saw. Lubricating oil used on shafting, until the iron has been ground into it, so as to produce a muddy black, comes the nearest to describing it of anything I can think of, but scarcely any of it was in the brood-chambers, for they were almost wholly occupied with brood.

In searching for the cause, I went into the cherry orchard of 1,000 trees, or more—the nearest point being not more than 20 rods from my bees—and found all thru the orchard, on the under side of the leaves, a black insect, or plant-louse, and the upper side of the leaves was covered with a sticky subtance, which the bees were vigorously gathering. This I thought would account for the very dark honey, but there was yet an unsolved problem; there was more light-colored honey than could be accounted for from basswood and clover, for these sources were nearly a total failure. On looking over the lawn of some 30 or more acres, a large number of box-elders were found, on the under side of the leaves of which were found a light green aphid almost transparent, and apparently much larger than those on the cherry-trees, and the upper side seemed to be more completely covered with honey-dew than were the cherry-tree leaves, and the bees were working it as vigorously as I ever saw them on basswood when in full bloom.

Since reading Prof. Cook's article I am more convinced of the source of the light honey than before. The dark honey was all extracted, but what to do with it was the puzzle. But late in the fall the idea of vinegar crost my dull perceptions, and immediately a warm liquid, that was strong enough to bear up an egg, was made by stirring into warm water honey enough to produce the result. So now I have about 80 gallons of very strong vinegar, which may be increast to 100.

One of the most striking objects to arrest my attention on making the examination for honey-dew was the difference that existed between the honey in two hives standing near each other. Supers were put on both at the same time, but one contained honey-dew almost as black as tar, while the other contained not a cell of such honey, but the contents was as clear and light-colored as any clover honey I ever saw. Query—Do individual colonies of an apiary have fields to which all the bees of the hive direct their attention, instead of scattering promiscuously over the whole territory? This discovery seemed to indicate such as a fact; at least it must have been so in this instance.

Kankakee Co., Ill.

Planting Fruit-Trees and Bushes for Honey.

BY F. A. SNELL.

THE opening of plum-tree bloom follows closely upon that of the cherry, and is rich in both honey and pollen. During fine weather the honey-bees fairly swarm in the trees, proving that a rich harvest is there in store. The air is made fragrant for quite a distance by the sweet perfume floating in the atmosphere. During a profusion of plum bloom no prettier scene can be witnest than to behold these trees in their snowy whiteness. The bees secure a fine harvest from this bloom to encourage and produce brood-rearing which at this season is so desirable by all apiarists.

Several plum-trees of the different hardy varieties should be grown by every bee-keeper even if the amount of land at hand consists of only a few town lots. Fruit-trees make a good and profitable shade. With the planting of hardy varieties of plums to the number of 25 to 50 trees on every farm, an increase of honey will be secured by our bees, and a profitable crop of fruit secured for family use and to sell. Good cherries as well as plums are in good demand each season and at good prices. If one will give the proper attention I doubt if any crop on the farm will pay as good a return as will an acre or two devoted to cherry and plum culture. The bee-keepers at least should do something in this direction, and may rest assured that a good reward will follow the effort so wisely made.

Apple-trees, peach and pear trees follow in opening of early bloom, or that coming before the small fruits. The apple is here grown to some extent, but not so much as it should be. A good many farmers have bought of unreliable agents, and also trees grown in milder climates than we have, and the trees have often proved not true to name, or tender so they soon die in our colder climate. This has discouraged a good many, and not near the planting has been done that would have been had earlier purchases given good results.

I have great faith in our climate for apples and much other fruit, if hardy, reliable trees are grown or planted.

The planting should consist of trees that have proved hardy in our home or Northern nurseries, buying only of those whom we know to be men of honor. With this rule followed, and good care given, we may grow the delicious apples instead of sending our money to distant States for them and paying freight, and the middlemen their profit besides. Who can estimate the benefit that would result to the bee-keeping industry of our country, and in the better health and wealth of our people ?

In the planting of an apple orchard it should be made a point to have a succession of fruit for family use from July 1st to the following April, which is easily secured by the proper selection of a few of each of the varieties to secure the desired end. Four to six trees of each variety will do for an ordinary family.

It must at all times be remembered that bees and fruit go well together, and that while the fruit-bloom is of much value to the bees and their keeper, the bees are also almost indispensable to the fruit-grower, and are his best friends, and aid in securing a good fruit harvest.

Peaches, pears and apricots have been planted here only on a very small scale the past few years, but the first two named have given the past three years good crops, the trees being loaded. Apricots are, so far as I know, too young yet to bear, so it is not known what the result from these trees will be.

Gooseberries, currants, raspberries and blackberries are here grown to some extent, and are of benefit to our bees. The two latter coming in bloom after the fruit-trees are out, help to fill the interim between fruit-tree and clover bloom.

With anything of a favorable spring, with our bees, well wintered, and the planting of fruit-trees and small fruits named above, our hives should be crowded with bees, and some surplus stored when combs are furnisht before the close of the fruit-blooming period, and on the opening of clover bloom our bees should be so numerous that each colony would promptly begin work in the supers. As it now is, only a part of our colonies are strong enough to do this at that time, and clover bloom may be in ten days or more before all our bees are storing in the supers.

Fruit-bloom is well known to be an important factor in the securing of a crop of surplus honey. To secure the desired results bee-keepers must do more planting of honey-producing trees and bushes, and encourage others to do so, and they will at the same time reap a double harvest—that of honey and fruit—than which no more healthful products can be named for man's use.

The honey-bees, in visiting blossoms of any kind in search of honey, carry pollen from blossom to blossom, and thus fertilize them and add to the fruit or grain so visited. This fact has been establisht beyond all doubt. This is of untold benefit to farmers and fruit-growers.

Carroll Co., Ill.

An Explanation of Foul Brood and Its Cure.

BY PROF. A. J. COOK.

I AM askt by one of our intelligent bee-keepers to explain foul brood, and to state whether all microbes are harmful. I am glad to give a brief chapter on these inconspicuous but very significant organisms, from the fact that I have had numerous inquiries of late on this very subject.

Bacteria or microbes, also spoken of frequently as germs, are very minute, so minute that were man magnified as we must magnify these Lilliputian organisms to study them at all, he would appear as large as Mount Washington. They are one-celled plants, and so are of the vegetable world. Some are spherical, others rod-shaped, and still others are spiral. They are classified from these three characteristic forms. The matter of form, however, is not so important really as their physiology or the work they do. As the rod form may merge into the spiral, the microbes reproduce in two ways. They may simply divide—one becoming two or more ; or spores, or minute germs may develop, and burst forth and develop into the specific microbes like that which produced them. Not all microbes are harmful. Some are helpful in removing dead matter. We now know that all decay is the result of microbe growth. We see, then, that except for these bacteria of decomposition the earth would soon be clogged by its own dead organisms. Some microbes work on the roots of legumes, like peas, beans, etc., cause tubercles or wart-like excrescences, and in their development breathe in the inert nitrogen of the air and combine it into available form for plant use. They are thus the cheap, rapid producers of our most valuable or expensive fertilizer—nitrogen, in available form for plant growth.

Other bacteria enter into the development of cream so as to give flavor to butter, and still others add their gifts in the processes of cheese-making so that many of the most valuable cheeses owe their superior excellence either to products arising from the microbes, or to the microbes themselves.

The microbe of foul brood belongs to the rod-like forms, and is one of the forms that develops in living organisms, and breeds decay. Thus these bacilli kill the organism which they attack, and death is followed with decomposition, which is peculiar in color, character and odor. The color is brown, much like that of coffee ; the consistency is sticky, stringy, and the thread formed in pulling it out is elastic, so that as it lets go the pinhead which draws it forth from the cell of comb, it flies back. The odor is very penetrating, and has been likened to that of old glue. These microbes seem to work on the tissues, and cause their disorganization. Other bacteria are supposed to generate poisons which tend to destroy the life of their victims. The microbes of diphtheria are of this kind. This is why the substances which are injected to destroy these poisons are termed antitoxins.

The dead larva or brood, victimized by the foul brood bacillus, after decay commences loses all semblance of its former self, and finally dries up and settles to the bottom rear end of the cell a dry scale, but supposed to have the germs of the trouble, so that it will ever be a menace until it is destroyed. As is well known, the cell cap sinks, is often perforated, and the dead brood with these signs in the cappings, the odor, and, best of all, the brown, ropy, elastic matter in the cell, are the best signs that the fatal malady is present.

Every bee-keeper should know these signs, for, unless he does, he may scatter the combs of dead brood, and so spread the disease very rapidly thru his apiary.

The idea of curing foul brood by use of salicylic acid, or phenol, is now entirely given up. These substances were never satisfactory, as they were very uncertain. Many careful apiarists secured no good at all by their use. To put the bees in a new hive on foundation, let them remain four or five days, gathering from the field or being fed as circumstances demand, then melting up these as well as the other combs, after extracting the honey, and living again on foundation, we entirely eradicate the disease. We have destroyed all the germs. The one danger is in scattering the honey as we manipulate the bees and combs. We must know that this honey has the germs of death in it, and so must be most cautious not to give any chance that any bees can ever get any of it until it is scalded. We must scald out the extractor after use.

Mr. McEvoy, of Ontario, says there is no danger of using the hive again, with no pains to scald it out. As he has had a very wide experience, treating thousands of colonies, he is certainly good authority.

Los Angeles Co., Calif.

One-Piece vs. Nailed Sections—A Foul Brood Inspector's Experience.

BY F. BOOMHOWER.

ON page 154, in "Beedom Boiled Down," it is reported that Mr. Doolittle says in the Progressive Bee-Keeper that he considers the nailed sections the best, as they will stand shipping better, and are not so apt to break down.

Now, I have never known any section, whether nailed or otherwise, to break down in a shipment. I have in the last 20 years handled and shipt upwards of 75 tons of comb honey, both by rail and water, and some by rail that went long distances, and I have never yet had a box to break, neither have I had a shipping-case to break, and I make the cases very light at that. Our cases hold 24 sections, and are made of basswood, weighing only 2½ pounds. I think it a waste of lumber and a useless expense to make boxes and crates of such heavy material. The ends of our cases are scant ½ inch thick, and generally the bottom and top are 3/16.

To nail sections is like going back to the old scythe and snath to cut grass. I would like to see Mr. Doolittle sit down with a job of 30,000 or 40,000 sections to nail. A dovetailed section can be put together before Doolittle or any one else can pick up and drive one nail. And if the dovetailed joint is glued—which we always do—a dovetailed sec-

tion is stronger, and will stand more banging than any nailed section I ever saw, and I used to nail a good many. I have seen a case of honey drop over 10 feet to the ground, with dovetailed sections, but not a box was broken; of course the honey was masht.

A LAUGHABLE EXPERIENCE IN FOUL BROOD INSPECTION.

I would like to relate a laughable experience that I had last fall while I was inspecting bees for foul brood.

I was notified one day to examine some bees about 10 miles from home. After some inquiries, and traveling over a very crooked road, opening at least a half-dozen pairs of bars, I found the place, and walkt up to the door. I rapt gently, and a large, portly woman with sandy hair and an extremely large mouth responded to my rap. I lifted my hat, and in as gentlemanly a way as possible bade her good afternoon. I askt her if her husband, Mr. H., was at home. Drawing her mouth to one side, the corner of which extended nearly to her left ear, and cocking her head to one side as far as her shoulder would permit, she replied:

"Y-e-s, he is over on the hill raking up buckwheat, a half mile or more away. *What dew yew want* to see my *husband* for? At this outburst, and the important way with which she brought it out, I made up my mind I had struck a snag, and it would be policy for me to proceed very carefully, for I had had some experience before, and something seemed to whisper in my ear, "Look out, old fellow, there is trouble ahead."

I smilingly and very genteelly replied that I had been informed that they had some bees that were diseased with foul brood, and that I had—but before I could finish my answer she strode up to within about two feet of me, and again cocking her head to one side, and putting both hands upon her hips, extending her mouth this time until the corner was so far around as to be invisible, she said:

"*A-r-e y-e-w* the chap what's around burning up foaxe-s *b-e-e-s?*"

Cautiously and carefully taking a step or two backward, and slyly glancing my eye over my shoulder to measure the distance to where my horse stood, in case of emergency, I replied that I had come to examine their bees, and if they were badly diseased, and no hope of saving them, I was there to see that they were properly taken care of. Again she came up toward me, and lifting that long arm with indignation and scorn written on her face, with her front finger she pointed towards the lane whence I had come, and roared out:

"N-o-w y-e-w g-e-t! If you don't I'l-l scald your eyes with hot water!" At this she made a dive for the kitchen, but as good luck would have it the fire was out, and I could hear her upbraiding one of her girls for being so shiftless as to let the fire go out, and not a drop of hot water in the teakettle.

"Oh," she said, "if I only had some hot water," coming back again to where I stood. Oh, I shall never forget the look that creature gave me, as then she bolted around the house out of sight, and at once began yelling to her husband to come to the house quick, for the man was there to burn up the bees. Oh, what a pair of lungs that woman did have. I thought to myself, when I heard that voice, if every one had such lungs we would not have any use for short-distance telephones. She made the hills and valleys ring, and as it echoed back and forth it reminded me of the old, long tin-horn that my grandmother use to blow to call the men together in anti-rent times, when the sheriff was coming. If all women had such a voice the tin peddlers would have no traffic in dinner-horns. I thought about A. I. Root, where he tells of getting his second wind while riding his wheel; if he only had half of the wind that woman had, he would not have to wait until he got his second wind.

After giving vent to those lungs, she rusht back to where I was standing, and if ever a man got a dressing down it was myself. Vainly I tried to reason and explain to the woman, but it was of no avail—her tongue was loose at both ends and hung on a double swivel with ball-bearings, well oiled, and it would have to be an expert at shorthand to have kept track with one-half of what she said.

Finally her husband appeared around the corner, and after introducing myself and explaining to him the object of my visit the best I could under the circumstances, we proceeded to examine the bees, after he had partly quieted her down and told her to shut up, and not to make a fool of herself.

I got a hive open, and to my great joy I found that they were about the crossest bees I had ever come in contact with, as she stood there with an old mopstick, flourishing it at me. I had fully made up my mind if she made a charge at me I would arouse the bees in my defense, and drive her from the field. I bumpt the hive and shook the bees, and even crusht a few so as to arouse their ire. It was but a moment before I was master of the field. Her husband made a dive and shot into an old pigpen with a lot of fighting bees in hot pursuit; and, glancing over my shoulder, I saw a sight I never shall forget, and often in my sleep I have dreamed about it, upon awakening I have laught out loud, and my dear wife has often told me that she believed I had the nightmare, but it was no such thing. It was only a vision of a 200-pound, red-haired, sandy-complexioned woman, with powerful lungs, a calico apron over her head, stamping and jumping with a few bees twisted up in her golden locks, with a mop in one hand, trying to get thru an old woodhouse, and calling to her daughter to come and pull a stinger out of her nose.

I proceeded to examine the rest of the bees in peace, and when once in awhile I would quickly glance up toward the house I could see the old woman peeking out of one window, and the husband and a couple of red-headed girls looking out of the other.

I found the bees rotten with foul brood, and rotten-broody combs strewn around the yard from colonies that had succumbed to the disease long before.

Finally, before I left, the husband came out, and then I told him that he seemed to be a quiet sort of a man, with considerable sense, and that I did not believe there was a law in New York State that would compel a man to live with such a woman as he had. He replied that he had become used to it, and one must not pay attention to all that women said. Schoharie Co., N. Y.

Is Pollen Fed to Larval Bees?—If so, in What Form?

BY G. M. DOOLITTLE.

A LETTER lies before me in which I find the following: "Do larval bees, at any stage of their existence as larvæ, eat pollen, or is their food of some other material? I see it is claimed by some that the young bee in the larval state does not eat pollen, but its food consists of a purely animal secretion. Please tell us thru the columns of the American Bee Journal what you think regarding this."

I am not informed in these matters to an extent sufficient to be considered an authority on this subject, therefore I am very glad to know that my "think" is what is wanted of me, rather than what I *know*. However, I am glad this question has been brought up, for it will be one of interest to most of us, and it will be a good time during the summer months to interrogate the nurse-bees, and perhaps while they are liberally feeding the larvæ they will tell us just what it is they are feeding then.

From many careful observations during the past, regarding the food of larval bees, I have been led to believe that such food is composed of about two parts honey or saccharine matter, four parts pollen or flour (where the latter is used in early spring as a substitute for the former), and one part water, the whole being taken into the stomach of the nurse-bee and formed into chyme, after which it is given to the larval bees in the cream-like form we see it surrounding the larvæ in the cells.

Right here I wish to digress a little and give some other observations as bearing on the eating of pollen by the old or hatcht bees. The older readers of the American Bee Journal will remember that some ten or more years ago I told how I starved some colonies entirely, and others partially so, trying to make them eat pollen in the fall, and at other times when there was no brood in the hive; and that, so far as I could see, not a cell of pollen was toucht. At another time some of the colonies had to be fed, when I again tried an experiment which I had formerly tried several times, which was to see if the bees in hives which had scarcely a cell of honey in them, but plenty of brood in all stages, would live, if provided with pollen.

As the weather at the time of this latter experiment was so bad that the bees did not fly for several days, it was with much anxiety that I waited to see what would be the outcome of the matter after the honey was gone. The first thing noted was that, as soon as the few cells of honey were gone, the larvæ was scrimpt for food, and the eggs removed from the cells, or more probably eaten by the bees, while a little later there was a general eating of the larvæ. A day or two later the sealed brood was taken from the cells and suckt dry, while the harder parts were scattered about the entrance and bottom-board of the hive. At this time I no-

ticed the bees putting their tongues together as they do when bees feed the queen, this thing being continued till nearly all the pollen was used up, which lasted for several days, when it came good weather again, so new supplies were gathered.

From these observations I formed the opinion that old bees partake of pollen only in the form of chyme, and that this chyme is prepared only when there is, or has been, brood lately in the hive. I have thus wandered to show that pollen can become a factor in our problem of wintering of bees, *only in connection with brood-rearing*, and that, where no brood-rearing is carried on, pollen can have nothing to do with the so-called disease—bee-diarrhea; and the result of the past winter, during which many colonies have had the diarrhea, only add strength to former opinions. But to return.

That the larval bee subsists wholly on this chyme, or creamy food, I think no one will deny; and if from my observations I am correct, the largest element in this food is pollen. As the larva absorbs this food the grosser part of the pollen forms itself into the yellow streak seen in the larvæ when taken out of the comb, but most plainly in the drone-larvæ, which streak is finally enclosed by the intestines of the newly-hatcht bee, and evacuated on its first flight.

If I had time it might be interesting to digress here again, and tell how I have found, by experimenting, that ewly-hatcht bees which have not had a cleansing flight are practically worthless to ship with queens long distances, and that I always avoid, as far as may be, catching such bees when sending queens to Australia and other distant countries, because they are liable to daub the queen and cages with their excrement, or die from over-distended abdomens; but I will not take the time here. To show that I am not alone in the belief that larval bees eat pollen, I wish to give the testimony of others who incline to a like belief:

A. I. Root says: "It is supposed that this larval food is pollen and honey, partially digested by the 'nursing bees.' Bees of this age, or a little older, supply the royal jelly for the queen-cells, which is the same, I think, as the food given to very small larvæ. Just before the larvæ of the worker bees and drones are sealed up, they are fed on a coarser and less perfectly digested mixture of honey and pollen."

Prof. Cook says: "The food is composed of pollen, for, as I have repeatedly proved, without pollen no brood will be reared."

Quinby says: "How this food is prepared is mere conjecture. The supposition is, that it is chiefly composed of pollen; this is strongly indicated by the quantity which accumulates in colonies that lose their queens and rear no brood."

Gallup says: "Every bee-keeper ought to know that bees do not feed pollen directly to their young, but it is elaborated in the stomach of the bee into chyme to feed the young on."

Kirby says: "With this pollen, after it has undergone a conversion into a sort of whitish jelly by being received into the bees stomach where it is probably mixt with honey and regurgitated, the young brood, immediately upon their exclusion, and until their change into nymphs, are diligently fed by other bees, which anxiously attend upon them, and several times a day afford a fresh supply."

Neighbour says: "A portion of this pollen is taken at once by the nursing bees, which are supposed to subject it to some change before offering it to the larvæ."

Gundelach says: "The larvæ are immediately fed by the worker-bees, with a pellucid jelly prepared in their 'chyle stomachs' by the digestion of honey and pollen mixt with water."

In the above I have told what I think in the matter, and given the "think" of several others, who very nearly, if not quite, agree with me; and I should be very much pleased to hear from any who do not agree. Let us all try to see if we cannot arrive as nearly at the truth in this matter as possible during the coming season's work with the bees.

Onondaga Co., N. Y.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

CONVENTION PROCEEDINGS

Report of Wisconsin Bee-Keepers' Convention.

The 15th annual meeting of the Wisconsin State Bee-Keepers' Association was called to order by Pres. F. Wilcox, Feb. 9, 1899, in the Lieutenant Governor's office at Madison.

The secretary's and treasurer's reports were read and approved.

H. Lathrop, as committee to secure freight rates on bees in less than car-lots, reported that after several efforts no rates could be secured. Mr. Johnson spoke of taking a sample hive to the general express office in Chicago, and getting a special rate to ship bees by express as cheap as by freight.

The members then listened to a paper by John Trimberger, of Clark Co., on

What to Do with Unfinisht Sections.

By way of introduction, and to emphasize what comes after, I will say that I have been in the bee-business 20 years. For five years I kept bees for pleasure and experimental purposes in all kinds of hives then known. In 1884 I had the good fortune to change to the 8-frame Grimm-Langstroth hive and the Heddon super; and have in use nothing else to-day except three of the New Champion chaff-hives. Last and most important I have used nothing but the 7-to-the-foot open-top section.

Your worthy secretary struck me right when he wanted a short paper on the above topic by a practical bee-keeper. I accepted because I hold myself to be immensely practical. For instance, I have never been fooled with reversible frames. Neither did I ever fool with no-bee-entrance or plain or tall sections, or fence separators; nor have I been fool enough to break up or smash unfinisht sections.

There was a time when bee-keepers almost unanimously advised to save unfinisht sections for next year's crop, as they were worth their weight in gold. That was good. Then came a time, and it is on yet, when too many bee-keepers advocated and still hold to the absurbity of extracting the honey from unfinisht sections; cut out the comb and break up the section lest you should be tempted to use them next season and spoil the whole comb-honey business. That was and is very bad! Only the loquacious paid writer or the manufacturers of sections and comb foundation could advise such a detrimental course.

You are already aware that I do not hold drawn or partially-drawn comb responsible for the occasional appearance of sour or watery comb honey. I will presently endeavor to show how and when such are apt to occur. Let us create an occasion and a condition. Here is a strong colony of bees June 24, with one surplus super on. Honey is coming in fast. We go thru the bee-yard to see where surplus room is needed. We come to this colony and notice with regret that we are a week late. The super was put on with an inch starter of extra thin comb foundation. Now it is full of comb honey, one-fourth of which is capt—finisht—ready to take off. We are prest with work. The super is lifted and an empty one added underneath. Next day this colony swarms, and it swarms again and again; but the hive is left standing undisturbed until we come around again on July 24. Ten to one, the honey is watery. It has an ashen-gray, bluish lead color with death perspiration standing in relief. For the same reason such comb honey will hardly ever be found after the swarming season is over and the bees have permanently settled. Such honey is put on the strongest and liveliest colony in the yard, or carried into the honey-room and set two or more feet above the floor, where a temperature of 90 degrees, Fahr., is maintained, artificially if necessary, and by letting the sunshine in full blast whenever it wants to. In a week or two it will be fair honey in the comb. I know of instances when it was reclaimed or resuscitated to represent fancy white comb honey.

We handle sections by the super or case. When the first super is filled, or nearly so, it is taken off, the unfinisht sections taken out, and after being leveled with the uncapping knife, if any be bulging, returned to the colonies for completion.

In the fall, when the grand conglomerate sweepstakes of surplus is carried into the honey-room, the orthodox temperature as above must be maintained. The finisht sections are placed six in a compartment of the super where formerly had been seven, making 24 to the super. Commencing well up from the floor, these are tiered with a piece of lath between every other one to give free circulation of air. The unfinisht sections are assorted and piled up the same way. Those that are well filled and capt one-half and better, to the point from which they go as finisht combs, are packt in regular shipping-cases, to-wit: Three sections long, six wide, two tiers high, 36 sections in all, and sold cheap at 8 cents a pound close at home. Two cases pay our road tax; one is given gratis to this neighbor, one to the other. The minister gets one free of charge, sure. All go like hot-cakes.

For two seasons I have used the Taylor handy (so-called) comb-leveler. To use it the honey must be extracted and the combs lickt clean by the bees. Light your lamp. Put water in the trough around the melter. Wait half an hour till all is hot enough to start in. Place your comb on the leveler and wig-wag it. When melted down to the prescribed limit, lift off. With a case-knife scrape off propolis and wax quickly lest it might ignite. With a tiny penknife open the sealed air, as air can be readily artificially sealed in this manner. I have purposely and repeatedly left such sealed air-cells untoucht, and put on the hives the following season when the bees left them the same; and I might have done a splendid business had air more weight. Beware lest a despairing sigh escape you; blow the moat dry, extinguish your lamp, etc., only to start fresh again.

All this is obsolete with me now. I do it no more. My first step in fixing the remainder of the unfinisht comb is by taking three unfinisht sections and the Bingham uncapping knife to the near-by village barber who hones it (the knife) to a razor edge. I now resolutely walk into the honey-room with the devout determination of doing a good chop. The aforesaid temperature is somewhat lowered to be more comfortable. A frame made of lath, unplaned and unpolisht (because it so holds the sections better) is laid on the table. It holds six sections. The left hand picks up a section, and with the aforesaid knife is made one great cutting sweep to the left and one to the right and one side is uncapt and the comb cut down low so that when the other side has received a similar treatment it is about an inch thick. Sections go into the frame, the frames into the extractor, the honey into my ripening and clarifying tank. Here is where the 7-to-the-foot open-top section scores a big point. You can cut the comb down easily.

All the unfinisht sections, whether or not they contain honey, are leveled. The tops of the cells that are propolized, even when low enough already, are shaved off. Propolized foundation is cut out entirely. The honey being all extracted from the sections, they are set out for the bees to lick clean and dry, so they can be stored away until the next season sees them on the hives again, to be filled by the bees and capt snow-white, to be shipt to market as fancy white comb honey. JOHN TRIMBERGER.

A lengthy discussion followed, especially upon evaporating honey not ripened as it comes from the unfinisht sections, and at times in extracting.

QUES.—Is all unsealed honey unripe honey?

Several replied no, especially that gathered in very dry weather, and often the fall-gathered also; that each bee-keeper should know at sight any honey that is ripened, and never take from the hive before such quality is secured.

A recess was taken to pay the annual dues, which was responded to by a large number, representing 14 counties in Wisconsin in attendance, and delegates from two other States.

Next was a paper by H. Lathrop, on

Producing Comb Honey Without Increase.

If your bee-cellar is not sweet, sprinkle a good coat of fresh lime on the floor. If the trouble is simply dampness, six or eight inches of dry oats-straw scattered on the floor will do much toward helping the matter. I have a bee-cellar that has a very moist, porous bottom; by using the straw as described, it has wintered very successfully for a number of years.

A certain bee-keeper has a chance to rent 35 colonies of bees from a farmer for next season. He wishes to run them for comb honey and take no increase; he will keep them where they now are on the owner's premises and bargain to leave the original number at the close of the season. How can he manage? There are several ways of procedure in such cases; I will mention two, either of which will work. I should visit the apiary in the spring often enough to see that each colony, if possible, was gotten in shape for the honey harvest, by feeding any that needed it, by equalizing and by seeing that each colony was provided with a queen that could attend to her proper duties.

Now when the honey harvest begins, provide all with supers that are in shape to work in them. Very likely some of the colonies will not swarm at all if given surplus room at the proper time, but you will have some one on the ground often enough to attend to the swarming question in the way that I shall point out. When you find a colony preparing to swarm by having queen-cells well under way, take a sharp knife and cut out and remove about two-thirds of the brood, including all that has queen-cells started on it. The bees will go to work and build down the combs again, and swarming will be stopt, very likely, for the season, especially if they are well at work in the sections. The brood thus removed can be placed over weak colonies, if there are any, in almost any kind of box, and allowed to hatch and build up the colony, or you can take it home and feed it to the chickens, and put what they leave into the wax-kettle, so that nothing will be wasted. In this way you may take a good crop of honey and have no increase of colonies.

This may look like a rough and wasteful way, but it answers the question, and it will work. At the close of the season the bees are all right, and have their combs rebuilt, so what harm has been done by cutting out the brood? Of course such work is not recommended for novices—it requires one who has a practical knowledge of bee-keeping; but even if practiced by a novice it would often result in far better returns for the labor expended than what is gained by the old method of letting the bees swarm and swarm, furnishing hives to put the new swarms in, the result—a lot of weak colonies to die during the winter or coming spring, and no surplus honey, unless the season happens to be an extraordinarily good one.

The other plan, which I will briefly outline, requires more fixtures, but as I said of the first, it will work if properly carried out. Make some cheap shallow cases of common fencing, same width and length as the hive, put sticks in the top to correspond with the top-bars of the brood-frames. When a colony swarms remove the hive to one side with the entrance turned in the opposite direction; hive the swarm in the shallow case on the old stand; reduce the old hive as much as possible, by getting all field-bees into the temporary brood-chamber.

After a few days when they have gotten well started in building combs, you can give them the supers that were on the present hive, or you can do so at once by using a queen-excluding honey-board.

After the first day turn the old hive around and allow it to remain beside the other with the entrance the same way. On or before the seventh day you can weaken the old colony to prevent further swarming, by shaking off the young hatching bees from the combs and letting them run into the other, which is to be made the working colony. The temporary brood-chamber being small, the queen will occupy nearly the whole space with brood so that you will get nearly all the surplus honey in the sections. After the honey season has closed, all supers have been removed, and you wish to leave the original colonies as you found them, place the old hive back on the original stand, and on top of it place the temporary brood-chamber; leave it there until brood-rearing ceases, and all brood is hatcht, then place a bee-escape under it, and when clear of bees take it away. It will be seen that when these two colonies are placed the one on top of the other, that there is a queen in each; one can be removed by the bee-keeper if he desires, otherwise the bees will do it. Almost any bee-keeper will know what to do with these shallow cases containing strips of comb and a very little honey. They can be saved entirely for the same purpose another year, or the honey and wax can be gotten out of them by the agency of heat.

Now, if any of my bee-keeping readers think they can furnish a better answer to the original question than the foregoing, I would be glad to have them do so, as I am here to learn as well as to furnish what information I can relative to the subject of bee-keeping. H. LATHROP.

As Aug. Weiss was present, and making over 14,000 pounds per year of his comb foundation, and having samples of foundation and long rolls of sheeted wax with him, many questions on comb foundation were answered by him.

[Continued next week.]

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

No Bee-Supplies for Sale.

Could you spare me a couple of queens now? If so, what kind are they, and what is your price? WISCONSIN.

ANSWER.—I don't keep anything in the line of bee-supplies for sale.

Albino Bees—Danzenbaker Hives.

1. Will albino bees give as good results as Italians?
2. Is the Danzenbaker hive a good one for the beginner?
CONNECTICUT.

ANSWERS.—1. Some albinos are better than some Italians, and some Italians are better than some albinos. Taken all in all, bee-keepers who work for honey seem to prefer Italians.

2. Depends something on the tastes of the beginner. For the majority it is perhaps not the best.

Bees Affected with Paralysis.

I have two or three colonies affected with paralysis, and can find but little advice in my books. What do you think of moving affected colonies, as fast as discovered, to some place away from the apiary? How far do you think it necessary to move them?
ALABAMA.

ANSWER.—I don't believe it would do any good. If the disease can be conveyed by having affected bees enter sound colonies, there would be no surer way to spread it than to move away the diseased colonies, for that would make the field-bees of the affected colonies enter the sound ones.

Colonies Deserting their Hives.

My bees swarm out and go into other hives, queen and all. I had 35 colonies, and eight of them came out and went with others. They did not rob, nor did they fight. I never saw this before. Some were good colonies. Can you give me any insight into this trouble? MICHIGAN.

ANSWER.—The trouble you mention is not so very rare, but it is not an easy thing to say why a colony with clean combs, having plenty of brood and honey, deserts its hive for another. I've some times thought it was because the old bees had died off rapidly, leaving more brood in the hive than the bees could cover; but as a matter of fact, I don't know.

Foul Brood—Good Text-Books.

1. I am a young bee-keeper, tho an old man, and ready to acknowledge my ignorance about the business. One of the things I don't know is, what "foul brood" is. Will you kindly describe it so that a novice can detect it?

2. I would like some good work on bee-culture. Will you please indicate some work suitable for a novice in the business?
MICHIGAN.

ANSWERS.—1. Turn to page 161 of this Journal, and you will find an admirable reply from Hon. R. L. Taylor—"Foul Brood in a Nutshell." [Also on page 275 of this number you will find Prof. Cook tells something about it.—EDITOR.]

Root's "A B C of Bee-Culture," Dadant's "Revised Langstroth," and Cook's "Manual of the Apiary," are good text-books on bee-keeping.

Using Hives and Combs Left by Dead Colonies.

1. During the severe cold weather last winter, four of my colonies of bees on the summer stands died. My plan is to put their hives under some of my strong colonies, then about swarming-time move the top hive to a new stand and leave the bottom one on the old stand, and introduce a queen in the queenless hives. Will my plan work?

2. When will be the best time to put them under?

3. There is considerable honey in the hives of the colonies lost. Would you advise feeding after I put them under, or just let them alone? My wish is to have as many good, strong colonies as I can by the time the honey-flow begins.

I wish to thank you for the answer to my last letter. Just as soon as I received the American Bee Journal and found your answer, it being a warm day, I went out and turned the hive upon the bottom-board, and began to rake out between the frames. The first thing I saw was Mr. Mouse running out. Then I saw the tail of a mouse on the bottom-bar of one of the frames. I pulled him out; he was dead, and so large that I had a hard time getting him out. I will look out for mice after this.

4. Will it be well for me to close the entrance of my hives some during cold days? I am using 8-frame dovetailed hives. ILL.

ANSWERS.—1. It may work all right, and it may not. Depends somewhat upon whether the colony is strong enough to work down into the lower story.

2. No matter how soon. It will do no harm to put them there right away, and will be the better for the combs.

3. With plenty of honey it isn't necessary to feed.

4. It would be a good deal of trouble to change the entrance daily to suit the weather, but it may be well to contract the entrance till warm weather comes.

Colony Destroying Eggs.

There is one of the most peculiar freaks now being indulged in by one colony of my bees, and I can't unravel the cause for such action. The bees destroy all the eggs transferred with combs from other colonies. It is quite strong with bees, and one of my best colonies of 1898, having a clipt queen, but commenced breeding quite early this season, and all hatch drone-bees, becoming a drone-layer. I have taken at different times frames from other colonies and inserted in the hive; the bees immediately destroy all eggs and even clean out the cells where hatcht. I confess that I am unable to solve the mystery. OHIO.

ANSWER.—I don't know. I have noticed that it is a frequent thing when a colony becomes queenless, or when a frame of eggs is given to a queenless colony, for most of the eggs to be removed or eaten, but I don't know why. It has also been said that when breeding ceases in the fall, it is the work of the workers rather than the queen, for there is a cessation of hatching some time before the queen stops laying.

Division-Boards—T Supers, Etc.

1. Is a common, 8-frame dovetail hive, 12⅛ inches wide, suitable for eight frames without a division-board? or would it space them too far apart? Do not a good many use them without division-boards?

2. Is it necessary to use any support for medium brood foundation in frames like yours, where it is firmly fastened at both top and bottom-bars?

3. In using T tins in the super, do you fill out at the ends with dummies? MISSOURI.

ANSWERS.—1. Probably not many use dovetail hives without division-boards, for most of them have self-spacing frames, and it's rather necessary to have a division-board—more properly a dummy—to get out the first frame. But eight *loose-hanging* frames will work all right, the only difference being that the frames will be spaced 1⅛ inches from center to center, a distance that some good authorities approve. But I would hardly advise loose-hanging frames.

2. Fastening at top and bottom will not do, for the foundation would stretch and bulge badly.

3. No, the T supers are shorter than the hives, and don't need anything to fill out the ends.

No. 1—POETIC BEATITUDE.—*Scribner's Mag. Advertiser.*

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR. SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., E. Whitcomb; Vice-Pres., C. A. Hatch; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. MAY 4, 1899. NO. 18.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

See that All Colonies Have Stores is the advice given in the Progressive Bee-Keeper by G. M. Doolittle, who prefers for that purpose combs of sealed honey, and next to that combs filled with feed, in either case these combs placed in the center of the brood-nest to stimulate the queen to greater laying.

Increasing the Association's Membership.—Mr. Herman F. Moore, secretary of the Chicago Bee-Keepers' Association, sends us the following suggestions looking toward an increase in the membership of the United States Bee-Keepers' Association:

MR. GEORGE W. YORK, Editor American Bee Journal.

Dear Sir:—I have a suggestion to make in regard to the United States Bee-Keepers' Association. Is there any reason why every bee-keepers' association in America should not be affiliated with the national organization? Why can't we say to the Philadelphia association, "Join us as a body, and your first year's dues will be only 50 cents a member?"

In the first place, we would get the addresses of all the bee-keepers who are members of any bee-keepers' organization, and interest them specifically in our work. In the second place, we should no doubt largely add to our membership list, for it is quite an inducement to get in for half-price. The local associations could vote the money out of the treasury, and levy a tax on their members to pay it.

There might be an association membership fee of $5.00 or $10 a year. Of course, certain benefits should be conferred for the consideration of such membership. An association should be entitled to one delegate to the annual meeting of the United States Bee-Keepers' Association for each 10 or 25 members of the local affiliated association.

A prize of $10 might be given to the local association sending in the largest list of new members.

It seems as if considerable advance might be made along the line mentioned, and perhaps more elaborated. I hope this will be taken up and discust generally by bee-keepers in the various journals.

As to the proposed union of the two big associations, let some one hunt up the names and addresses of all those who are members of both (and I suppose favor amalgamation), and let them correspond with each other regularly until the desired result is brought about.

HERMAN F. MOORE.

Some years ago an effort was made to get local bee-keepers' organizations to affiliate with the National, but only a very few of them seemed to think enough of the matter to thus become affiliated. But perhaps circumstances are different now, and something might be accomplisht along the lines indicated by Mr. Moore.

We would further suggest that Mr. Moore's ideas be considered at the Philadelphia convention, next September, as no definite action can be taken before that time. It might be well, however, to discuss the subject in advance of the meeting, so that various opinions might be thoroly understood and be given due attention when the time comes for final decision.

Cuban Bee-Keeping is not very encouragingly spoken of by "An American Tramp" in Gleanings. He says the wages paid to bee-keepers are from $15 to $25 per month and board. The houses in the country have been burned down, and those in town are so filthy that no woman from a comfortable home in this country would be content to live in them. Fleas are so bad that he says he had to wash himself with kerosene oil to get any rest, said oil costing 50 cents to $1.00 a gallon. Whisky and cigars are cheap, other necessaries (?) high.

We are inclined to agree with Editor Root in his views as exprest in the following comment on the article by "An American Tramp:"

"I have concluded not to go to Cuba just yet. If I must bathe myself in coal-oil at $1.00 per gallon to keep off fleas I'll stay at home awhile longer. Seriously, one should think twice before going to this land devastated by the hand of war. Conditions will improve, no doubt, in the near future. In the meantime the average bee-keeper better keep his good dollars and invest them at home."

The American Bee-Keeper for April contains this editorial paragraph:

"From a recent letter written by Mr. Craycraft, of Cuba, the following interesting notes were gleaned: There are six or eight apiaries of importance in the vicinity of Havana, aggregating perhaps 1,600 to 1,800 colonies. There is still some foul brood in that locality. The apiary formerly owned by Mr. Osburn is now in the hands of a Cuban. A Mr. Ravelo, having about 400 colonies eight miles south of Havana, had, on Feb. 10, taken something over 3,000 gallons of honey this season. It is Mr. Craycraft's opinion that Cuba produces the finest grade of honey in the world, and that some enterprising person or firm is needed to bring it before the world. Mr. Craycraft takes a very cheerful view of Cuba's apicultural future."

Spraying Fruit-Trees in Bloom.—It is very encouraging to see that fruit-men are beginning to understand more fully that bees are their friends, and to deprecate the practice of spraying fruit-trees when in bloom. The following appears in the National Stockman and Farmer, not in the apicultural but in the horticultural department:

A correspondent in Franklin, Pa., writes: "I think it is unlawful to spray fruit-trees while they are in bloom with poisonous mixtures of paris green, etc., and it would be well to call attention to the matter in your valuable pager. Some

farmers spray when the trees are in bloom, and thus destroy many bees, which is certainly wrong."

REMARKS:—There is probably no law on the subject in some of the States, and yet there should be. No thoughtful person, even tho he has no bees of his own, would be willing to injure those of his neighbors; but some people are not as careful as they should be.

The time to spray is, first, before the buds expand, and, second, after the bloom has fallen off. Subsequent sprayings may be necessary, according to the judgment of the orchardist, but there is no need to spray while the trees are in blossom. The bees are among the best friends of the fruit-grower, carrying pollen from one flower to another, and from one tree to another, and any one who raises fruit —of any kind—will find it to his advantage to keep bees, even without taking the honey into account.

It would be a splendid thing for both fruit-grower and bee-keeper if all the farm papers would stand with the able National Stockman and Farmer in this matter. Of course it takes time to educate the public, but it can be done if persisted in by those who know the facts and can spread them among the people.

Advertising Bees and Queens.—Owing to the quite severe and general loss of bees the past winter, there will likely be a good demand for bees and queens. In view of this, we would suggest that those who will have any for sale cannot do a better thing than to offer them thru an advertisement in the American Bee Journal. Our rates are very low, considering the quality and quantity of our weekly circulation. Send for rates on advertising if you are interested in the suggestion we have made.

Also, all dealers in bee-keepers' supplies will find it to their interest to keep their advertisements standing in our columns. The G. B. Lewis Co. now are using a half-page of space; the A. I. Root Co. a third of a page; and many others who do any business realize that if they want to reach bee-keepers they must use space in a paper that goes to the people they want to induce to become their regular customers. Those dealers who have tried it say that the old American Bee Journal draws business their way. It would be glad to help turn some your way, too, if you want it to do so, and if you are not already among its list of reliable advertisers, and deserve to be found there.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

No. 2—ANOTHER POETIC BEE-ATITUDE.—*Scrib. Mag. Adv.*

EDITOR HILL, of the American Bee-Keeper, says: "Why not begin the season right by adopting some good record system? One year's experience will convince those who have not tried it, of its advantages."

* * * * *

THE DREXEL POULTRY-YARDS advertised on page 283 of this issue, are owned by a personal friend of the Editor of the American Bee Journal. He will give entire satifaction to all who extend to him their patronage. If you are interested, give him a trial order, not forgetting to mention having seen the advertisement in the Bee Journal.

* * * * *

A LANGSTROTH MONUMENT SUGGESTION comes from the Island of Jamaica, as follows:

"Mr. Secor, on page 200, asks for approval or otherwise of the inscription for Father Langstroth's memorial. Having subscribed our mite, allow us to suggest that the wording remain as it is, only arrange it so that it will represent a Langstroth frame; or have the words engraved on a Langstroth frame in relief. In some way the *movable frame* should be shown, and not *less than $500* spent on the shaft.—JAMAICA."

* * * * *

GENERAL MANAGER THOMAS G. NEWMAN, of the National Bee-Keepers' Union, writing us April 24, said:

EDITOR AMERICAN BEE JOURNAL:—On page 248, it is stated that I have made "demands" as a condition of amalgamation of the two Unions, and that these are never likely to be assented to by General Manager Secor, and that there the matter rests, etc. This is *news* to me. I have never made *any* "demands" in that line, and *call for the proof*.

Yours truly, THOMAS G. NEWMAN,
General Manager.

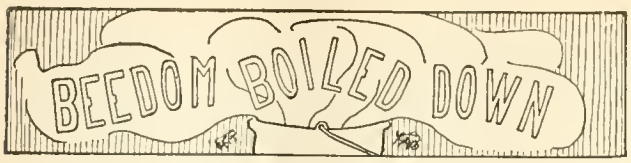
We think perhaps Mr. Newman has taken Mr. Abbott's words, as given on page 248, a little too seriously. We do not know to what he (Mr. A.) referred, but are certain that whatever it was, it must have been only a mere difference of opinion, and likely the word "demand" was not the proper one to use, as we do not know that Mr. Newman has *demanded* anything lately in regard to amalgamation. Still, we haven't much doubt that before a uniting of forces could be consummated he would require certain conditions ere he would advise the Union to go in with the Association. But we don't believe any further public discussion of this matter is either necessary or desirable.

* * * * *

MR. FRANK BOOMHOWER, of Schoharie Co., N. Y., is suggested as State inspector of apiaries by Mr. P. W. Stahlman, of that county, in the following, dated April 22:

EDITOR YORK:—I notice on page 248, that the proposed Foul Brood Bill has become a law in New York, and I endorse the words that Mr. H. S. Howe expresses, viz.: That its success will depend upon the man who may be appointed inspector. I think that Mr. Frank Boomhower, of Schoharie County, would be the man for the position. He has been inspector for two years in his county, and has done good work. (See his article in Gleanings of Sept. 15, 1898, page 691.) He is a man of 26 years' experience in the bee-business and has had much experience with foul brood. He attends strictly to his duties, and is very particular in all his work about bees. He knows what he is doing, and has the "git" to push things right thru. I know of no better man in New York for the place. P. W. STAHLMAN.

On another page of this number will be found an article by Mr. Boomhower, in which he gives a sample of the experiences he has in his work as inspector. In the case cited he evidently exhibited great bravery; and if he can handle the disease known as foul brood as diplomatically and successfully as he did his feminine enemy, we think that he possesses qualifications that ought to recommend him very highly for the position. But personally we know nothing of the candidates for the inspectorship in New York—neither as to the men themselves, nor their special fitness for the position.



To Preserve the Aroma of Honey, according to a discussion reported in Canadian Bee Journal, it is important to seal it up as soon as possible. Any exposure to the air, unless for the sake of further evaporation, is a damage to the quality of the honey.

For Spring Feeding, Bee-Chat advises to let weak colonies alone, feeding only the strong colonies with syrup, and taking filled combs from these strong colonies for the weaker ones. Provident bee-keepers may do still better to have on hand a stock of combs of sealed honey, so no syrup need be fed.

Travel-Stain.—J. E. Crane reports that where old comb had been cut down and the bees had built out new, the part nearest the old comb was darkest, and the color changed to nearly or quite white at the edge farthest from the old comb. Also that the cappings in an extracting-super were dark if young bees had been reared in the comb, but white in combs that had not been used for brood-rearing.—Gleanings.

Sun or Shade for Wintering.—The editor of Schweiz. Bztg. found, as the result of observation, that a colony standing in a sunny place, on account of more frequent flights, consumed three to four pounds more from Nov. 1 to Feb. 1, and also had more dead bees than one in a shady place. That leaves it still possible, however, that in other localities the shady place might be the worse of the two. At least if the place is so shady that bees are confined too long.

Quinby's Idea of Size of Hives.—F. L. Thompson has been doing some figuring in the Progressive Bee-Keeper. Quinby's 2,000 cubic inches for a box-hive is by no means the same as that amount of space in the body of a frame hive, for in the latter case a lot of room is taken up with the wood of the frames and the surrounding spaces. A 10-frame Langstroth would about suit Quinby's idea, as the space inside the frames is 2,100 cubic inches. An 8-frame hive has only about 1,670 cubic inches inside the frames.

Scholz (or "Good") Candy.—To make this candy, G. M. Doolittle thoroly warms good powdered sugar by setting it near the stove four to six hours, then good, thick, wholesome extracted honey is warmed till it feels quite warm to the hand; the sugar is stirred in till it can be workt by the hands, when enough of the sugar is kneaded in till the loaf will stand up without flattening down when placed on a flat surface. It is now set away in a warm room for a week or so, when it is ready for use: but if the weather is warm, or the queens are to go to a warmer climate, about ⅛ of the bulk of the candy must be kneaded in of fine *granulated* sugar, when it will not run, even at 100°.—Gleanings.

Wintering Bees in Colorado.—F. L. Thompson reports, in the Progressive Bee-Keeper, some points brought out in a discussion of Colorado bee-keepers. Single-walled hives are chiefly used, but chaff-hives or cellaring might pay well in saving bees and honey, if properly managed. He says:

"But chaff-hives should be painted a dark color, not have propolized or sealed cloths between the frames and top packing, not have too thick walls, an inch or two being sufficient between outer and inner walls, and should be examined at the conclusion of cold spells to make sure that the top packing continues dry; if not, it should be aired as soon as the weather is warm enough. One member reported that for three years in succession he had made tests of chaff-hives on a large scale with single-walled hives sitting along side, and every year found that the colonies in chaff-hives had enough more honey to pay for the hives. Another said he always had to remove honey in the spring from his chaff-hives, to make room for the brood; and that his cellar-wintered colonies consumed five or six pounds during the winter, while the others averaged 20. Another said that bees in his thick-walled chaff-hives, painted white, with the same quilts they had in summer, and left to themselves in winter, invariably wintered very poorly."

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GENERAL ITEMS

A Long, Severe Winter.

My bees nearly all died during the past long winter. I think it was the longest and coldest winter I ever past thru. The first heavy snow here fell Oct. 13, about one foot deep where not drifted, and it did not lie long except where drifted, but it soon turned cold, and has been a very long, severe winter, the most so of any winter here known to the oldest inhabitant. I had 26 colonies of bees last fall, and now have just four. I am allowing them to build up on the honey left by dead colonies, taking off the covers and setting out from the live bees, some distance, and now think it is a wise Providence, as I could not attend to so many without help or overwork.

GEORGE MCCULLOUGH.

Page Co., Iowa, April 13.

"Adel" Means "Noble."

On page 235, Henry Alley gives his explanation for the adel bees. He says, "adel means superior." If I am right, adel signifies noble, and adelig means nobility. Adel is a German word and means something with a pedigree; Adeliger, meaning nobleman, is, to my mind, not superior to other people as man, tho he may be in his class in a far away land.

Bees are flying every day now, and doing well.

ALBERT WILTZ.

Atchison Co., Kan., April 16.

Weak Colonies—Little Clover.

Bees are working very hard now, bringing in pollen, but we have very many very weak colonies. Mr. Axtell says there is but little white clover left in this neighborhood.

MRS L. C. AXTELL.

Warren Co., Ill., April 26.

A Rather Gloomy Outlook.

The outlook is gloomy. Bees, as far as I know, are gone from the smaller keepers. The larger ones have suffered, while beekeepers of my type don't know yet how they do stand. I have 30 dead colonies, and the next 20 days will demonstrate what small colonies will do in maintaining their identity after a winter with no warm days in March.

Yesterday my bees had their first flight since the warm days in February, and it was so cool yesterday that none took wing till the afternoon, and then only for two hours. Of course, we are up in the clouds—1,200 feet above the ocean—and don't have warm days. All days are clear and bright here. We have little but sunshine; neither snow nor rain or clouds to compare with the southern part of the State. It is uniformly cool, and this March it was colder—a week near zero all the time, and 28 to 30 degrees below two mornings—10 degrees colder than for four years. I will write again after finding how things turn.

T. F. BINGHAM.

Clare Co., Mich., April 11.

Bees and Sorghum-Making.

In regard to the question of keeping bees and running a sorghum mill, my experience is much on the same line as that of Andrew Carlson, on page 109. I have workt the two together for eight years. My bees are about the same distance from the mill, but a neighbor keeps bees within three rods of the mill. The bees give no trouble as long as there are flowers to gather nectar from, but after a frost, followed by warm days, they come in large numbers, but we could control them with smoke. But last season was a beater. The summer was a poor one for honey, the flowers prac-

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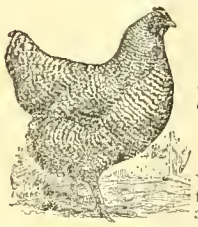

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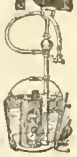

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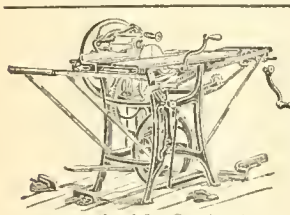

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tically closing by June 20, and the bees were idle until sorghum-making commenced, which was Aug. 29.

The second day they began to come in swarms, and seemed to be perfectly wild after the sweet; they were into everything where there was juice or syrup unless tightly covered, smoke having no effect unless so dense that the hands could not work in it. They would fly into the steam, causing them to drop into the boiling juice. The juice-tanks would be covered with drowned bees.

At the mill they were the worst; some days they came in such swarms that I was compelled to saturate cobs with coal-oil, set fire and burn the bees. I confess it made my heart ache to destroy them when they were trying so hard to supply themselves with food.

Now as to the effect on the colony at the hive: I believe it is quite a benefit, as it stimulates the queen to laying and brood-rearing, thereby having a good supply of young bees to winter, for those that are destroyed are old workers, and would die before spring, and the sweet they store is all used before winter by the young brood, as I have found none in the cells when I prepare them for the winter, which is the last of November.

The loss of bees this winter from starving and freezing is heavy—from ⅓ to ½. Very few use chaff-hives, and none winter in cellars. ORION CONGER.

Shelby Co., Ind., March 29.

Hard Winter for Bees.

I have my bees—about 100 colonies—in the cellar yet, having lost a few during the winter. This has been a hard winter for the bees, in this location, on account of cold weather. A great many have lost all their bees. SAM SEVERSON.

Clark Co., Wis., April 7.

Bees Building Up Well.

Bees that pulled thru the past winter are building up finely. Fruit is just blooming, and alfalfa is growing well. Otero County did not lose as large a percentage of bees as most places report. F. W. CHAK.

Otero Co., Colo., April 25.

Visit to Louisiana—Lost None.

Last January I ran down to Louisiana on a visit to my old home, 48 miles north of New Orleans. I spent two days with my nephew, Edwin R. Wells, who has a very pretty home just a half mile west of town. The "queen" of this home, an intelligent and womanly little woman, and four or five children, make Mr. Wells one of the happiest of men. He is engaged in strawberry and vegetable growing, and bee-keeping. His vegetables and berries are shipt to Chicago, and net him quite handsomely. The product of his apiary, he told me, he could not so easily dispose of. His bees did very well the past season, storing a good surplus. There was served on his table, while I was there, some finely-flavored extracted honey of a light straw color. It was quite thick, but it never granulates. I was unable to ascertain whence the nectar was taken by the bees. He had Italianized his apiary about three years ago, but there being so many black bees in the forest and in neighboring colonies he was unable to keep his stock pure. One of the greatest depredators on his apiary is an immense dragon fly that comes during the spring and summer, just before sunset, and waylays the homeward-bound, heavily-laden little bees, and devours them with ravenous appetite.

Mr. Wells has promist to write me a list of the nectar-producing plants of that region, together with some of his experiences in a Louisiana apiary, which I may give to the readers of the Bee Journal, if considered worthy of interest.

Our bees here are in good condition, and out of 11 colonies, packt last autumn, we have lost none. I happened to be busy

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MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

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cribbing a large crop of corn at the time the bees needed fixing for winter, so Mrs. Durbin gave them her attention, and without assistance from any one arranged them so comfortably that they past safely thru our unusually severe winter, with the mercury running down to 28 degrees below zero. They are on the summer stands. It is too early to prognosticate for the coming season. WM. J. DURBIN.

Fayette Co., Ind., April 12.

Substitutes for Pollen.

We would like to exchange some rain for sunshine just now. Our bees are not getting any pollen, and have not been for about three weeks, consequently they are not rearing any bees. So we fear they will not be in condition to make the best of the honey-flow which we usually have in May, from poplar, willow, black locust, blackberries and dewberries.

Dr. Miller recommends giving bees a mixture of oats and cornmeal, and from reading bee-books and papers I have been led to believe that flour, meal, and such mixtures could and would be used as a substitute for pollen. So with the idea untested. I have been giving my bees corn and oatmeal mixt. I also put flour where they could get it. They seem to like flour the best. I will add that this is the first time I ever noticed that bees could not get all the pollen they needed.

I would like to ask Dr. Miller or any of those who have been telling beginners to feed corn and oatmeal, flour, etc., what good does such stuff do the bees? It certainly is no good as a substitute for pollen, or larva food. for I have several colonies at this date in which there are from one to three Langstroth frames filled with eggs, and have been for the last 15 days, and yet there are no young bees in any of the combs. This rather puzzled me, and I took some of the combs of eggs out and gave empty combs, and the queen would at once fill them with eggs.

One might think it would not be taken by them unless it could be valuable in some way, but such proof is not worth much, for they will take fruit-juice, sorghum or almost anything that is the least bit sweet, in times of scarcity, yet almost any bee-keeper of experience can tell you that bees will not thrive on them. I do not know of any good it can be to them, unless the old bees use it as food, and I am not sure they would not be better off without it.

My bees have carried several pounds of meal and flour into their hives without any apparent benefit. So if there is any good in feeding corn and oatmeal, flour, etc., let's know what it is. C. PRESSWOOD.

Bradley Co., Tenn., April 11.

Albino Bees—Loss of Bees.

EDITOR YORK:—I see several are asking for a description of the albino bees. By this mail I send you a cage of my albinos. You rather intimate they are lacking in vigor, or color-matter, which would convey the impression that they are an inferior race or strain. I have had this strain of bees for the last six years, and in the past 12 years I have had queens of every and all the different strains and races now in the United States, except the Punics; I have had queens from nearly all the prominent breeders in the Union and Canada; and I consider, taking all points, the albinos the superiors of the whole lot. Because their hair is white I can't see why that should lessen their vitality.

I now have an old white mule which my father bought when I was a boy. He (the mule) is now 29 years old, and the past winter he helpt to plow 80 acres of land for corn, and is far better than many black, sorrel, and bay mules I know. Surely, his white hair has not lessened his vitality.

Because the albinos have white hairs on their abdomen, and rather a bluish hair around their shoulders and head, I can't see why that should weaken their constitution; and as the regular Italians have a

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Comb Foundation

Wholesale and Retail.

Working Wax

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Hives, Sections,

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I sell the VERY BEST at lowest prices and ship promptly.

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Beeswax always wanted for cash or trade at the highest price. Address,

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BEES QUEENS Smokers, Sections, Comb Foundation And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

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SILVER GRAY CARNIOLAN —QUEENS—

—ALSO THE—

Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Untested Queens in April, $1.00; Tested, $1.50.

9A2ot **J. D. GIVENS, LISBON, TEX.**

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IF YOUR COAT FADES

you bought the **wrong kind.** If your wire fence "looks like a fish net," you didn't buy **The Page,** or else your posts have given away.

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The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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330 Market Street, - SAN FRANCISCO, CAL.

EGGS FROM BARRED PLYMOUTH ROCKS — Thorobred — Fine Plumaged Fowls—Farm Raised—75 cents per dozen. MRS. L C. AXTELL, ROSEVILLE, ILL.

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2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

F. J. GUNZEL, Obear, Craighead Co., Ark.

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5 YEARS (remainder of 1899, 1900, 1901, 1902 and 1903) will be sent by mail to any address for A DOLLAR BILL.

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The Farm Journal and the Bee Journal.

Offer No. 1. We will club the Bee Journal for one year and the Monthly Farm Journal for five years (as above) all for $1.40; the Farm Journal alone is 50 cents a year.

Offer No. 2. Send us ONE new subscriber for the Bee Journal for a year at $1.00, and we will order the Farm Journal for you for 5 years as a premium.

Offer No. 3. Or, send TWO new subscribers for the Bee Journal for the balance of this year at 60 cents each, and we will order the Farm Journal for you for 5 years as a premium.

Better apply soon, as we have only a limited number of 5-year FARM JOURNAL subscriptions to offer. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

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Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

Please mention Bee Journal when writing.

faded yellow or dirty brown hair, why this color should make them more hardy.

The general report is that more bees were lost the past winter in Texas than was ever known before. I wintered 100 full colonies and several 4-frame nuclei without the loss of one, all on the summer stands and no protection whatever, altho the weather took a tumble in February from 70° above to 10° below zero in 24 hours. J. D. GIVENS.

Dallas Co., Tex., April 17.

[The bees were received and are nice in appearance. A thoro trial, such as Mr. Givens has given the albinos, ought to have some weight. We have no doubt that they are good bees, but certainly no better than some others because they have a sort of whitish hair on their bodies.—EDITOR]

Convention Notices.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Benna Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.

New Milford, Ill.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.

Hutto, Texas.

Colorado.—A joint meeting of the Colorado State Bee-Keepers' Association and the Denver Bee-Keepers' Association, will be held in room 33, second floor of the Capitol Building, in Denver, Wednesday, May 10, at 10 a.m. Amendments of the Constitution and By-Laws, and other important matters, will be brought up.

FRANK RAUCHFUSS, Sec.

Denver, Colo. (box 378).

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Am I prepared to furnish everything needed by the up-to-date bee-keeper, all goods manufactured by THE A. I. ROOT CO., shipt to me in car lots, and sold at their prices. Send for illustrated, 36-page Catalog FREE.

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500 GOOD LANGSTROTH BROOD-COMBS

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
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Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address

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Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00; each,	by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00; "	1.10
Conqueror	3-in. stove.	Doz.	6.50; "	1.00
Large	2½-in. stove.	Doz.	5.00; "	.90
Plain	2-in. stove.	Doz.	4.75; "	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50; "	.60
Honey-Knife		Doz.	6.00; "	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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Write for Illustrated Catalog and Price-List FREE.

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Please mention Bee Journal when writing. **MARSHFIELD, WISCONSIN.**

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 18.—Best grades of white, 13c; off in color, etc., 11@12c; light amber, 10@11c; dark amber and mixt buckwheat, 7@9c. Extracted, clover, 8c; other grades of white, 7@7½c; ambers and dark, 6@7c. Beeswax, 27c.

Sales are in a small way, as the time of year is with us which usually sees the close of active sales. Owing to the inclement weather which has cut off the early fruits and vegetables the honey market has benefited, so that all of the white comb is nearly disposed of. There is quite a quantity of dark and undesirable comb being offered. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey. M. H. HUNT.

NEW YORK, April 19.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat, 7@7½c. Extracted in good demand at unchanged prices. Beeswax quiet at 27c.

Our market is well cleaned up on comb honey. There is a fair demand, especially for white. HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, April 5.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6¾@7c. Beeswax, 26½@27c.

Beyond a small jobbing trade, mainly out of supplies in second hands, there is nothing to record in the way of business. There are only moderate supplies, and these are mainly comb. Values are steady. It is too early to get definite information concerning coming crop, but it is not likely to prove large in this State.

BOSTON, April 18.—Fancy white, 13c; No. 1, 11@12c; A No. 1, 10@11c; light amber, 9c. Extracted, stocks about cleaned up. Nominal price for white, 8c; for light amber, 7c. Beeswax, very light stocks; selling at 27@28c.

Naturally the demand for honey is gradually growing less, and altho stocks on hand are not large, still the demand is so small that the general feeling is weak and prices are being shaded in order to work off stocks. BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c. PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & Co.

BUFFALO, April 21.—Our market is cleaned up on fancy comb; more would bring about 12 cts. There are more or less very poor lots selling at 7@8 cents, at which quite a large amount can be sold. Extra fancy beeswax, 28@30c. BATTERSON & Co.

OMAHA, April 18.—There is but little stock left in dealers' hands now, and realizing that no further receipts can be expected until another crop gets into the market, it is held firm at 14c for fancy white comb. Extracted, 7½c. PEYCKE BROS.

MILWAUKEE, March 2.—Fancy 1-lb. sections, 13@14c; A No. 1, 12@12½c; No. 1, 11@12c; dark or amber or old, 7@10c. Extracted, in barrels or kegs, white, 7@7½c; dark, 5½@6½c. Beeswax, 25@27c.

Since our last report we have had a very good market for honey, and the demand has been very good for all grades, especially for sections of the best quality, and the demand is good now and small supply. We encourage shipments of best comb. Extracted, fair demand. A. V. BISHOP & Co.

Nuclei of Bees For Sale.

We have arranged with a bee-keeper in Lee Co., Ill., about 100 miles west of Chicago, to fill orders for 3-frame Nuclei of Italian Bees, with Queens, at $2.75 each, or in lots of 5 Nuclei, with Queens, at $2.50 each. Orders can be filled about May 10 and after.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

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It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

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Headquarters of the Eclectic System.
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IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.
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I ARISE

To say to the readers of the BEE JOURNAL that
DOOLITTLE...
has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.
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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co.....Watertown, Wis.	J. Nebel & Son .....High Hill, Mo.
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J. M. Jenkins.....Wetumpka, Ala.	J. W. Bittenbender.....Knoxville, Iowa.
Portland Seed Co.....Portland, Oregon.	J. L. Gray .....St. Cloud, Minn.
E. T. Abbott, ...St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
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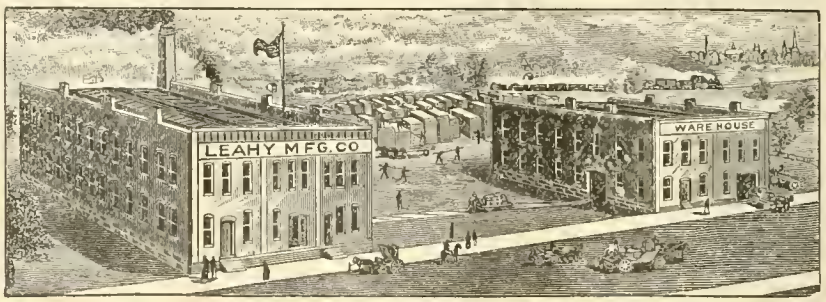

For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Eastern Bee-Keepers!

Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

BEES IN SEASON.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.
Illustrated Catalog, 72 pages, Free.
We also manufacture Tanks of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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Please mention the Bee Journal when writing Advertisers.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MAY 11, 1899. No. 19.

CONVENTION PROCEEDINGS

Report of Wisconsin Bee-Keepers' Convention.

[Continued from page 278.]

The three following papers were read by those whose names are signed thereto:

Future Prospects of Wisconsin Bee-Keeping.

We can only judge the future by the past. For the past 20 years the price of honey has steadily declined. It is true, prices were higher in 1898 than in 1897, so also in every season of very short crops. Still, the general tendency is downward, as will be seen if we look at quotations for a few years past, taken in December of each year:

	Comb honey.	Extracted honey.
1881	14 to 22 cents	8 to 10 cents.
1883	14 to 20 cents	8 to 10 cents.
1885	13 to 16 cents	6 to 8 cents.
1886	10 to 13 cents	6 to 7 cents.
1889	10 to 15 cents	6 to 7 cents.
1890	12 to 15 cents	7 to 8 cents.

From 1890 to 1896 a little decline each year.

1897	8 to 12 cents	4 to 6 cents.
1898	10 to 13 cents	5 to 6½ cents.

The lowest prices we have ever seen were in 1897, when there was a good crop over a large portion of the country. The crop of 1898 was very short, and the advance of prices was from one to two cents per pound.

The improvements in methods and appliances may have had some influence in increasing the quantity, and consequently cheapening the cost of honey. The diminisht profits of other pursuits has induced many to engage in bee-keeping who would not otherwise do so, and thereby helpt to fill the markets and drag down prices.

I have noticed that whenever a good crop brings down the price in any of our small villages or cities the decline becomes permanent. A poor crop the following season will not restore prices. Whenever two or more apiarists bid down the prices for their own town, they cannot easily advance prices in that town again. An advance of one cent a pound induces many to dispense with it who would willingly pay a fair price if they did not know it had once been sold cheaper. This being true, according to my observations, bee-keepers should be slow to undersell their neighbors in the home market.

There is also noted a tendency toward higher prices for supplies, which affects profits, but I hope this will be of short duration.

Against these discouraging thoughts we may find some encouragement in the thought that more honey is being consumed by the working people; this increast consumption I think is likely to continue. We are hopeful of legislation that will tend to suppress the adulteration of honey, and this will increase the consumption of honey by giving people confidence in the purity of what they are buying.

Any improvements either in packing or transportation that will enable us to ship comb honey without smashing it will help to increase consumption and strengthen prices. I am confident the majority of producers don't know how badly their comb honey looks after it has been shipt even a short distance by railroad, especially in cold weather.

All things considered, I look for lower prices for two or three years to come, but not much below the prices of 1897.

Juneau County. F. WILCOX.

Handling and Shipping Extracted Honey.

Some seasons extracted honey should be handled differently from what is necessary in other seasons. For instance, last season, in my locality, almost any way of handling it would have been successful, because the honey as soon as stored in the combs was very thick, so that it would

Pres. F. Wilcox.

strain very slow thru cheese-cloth while yet warm. Presumably, the cause of it being so thick when gathered was on account of the very dry weather during the honey-flow, which is nearly all from basswood bloom.

My mode of handling honey when in the above condi-

tion is to have a funnel large enough to hold a pailful, with the small end just the right size to fit in the bungholes of the barrels or kegs that I wish to store the honey in. Then have a cheese-cloth strainer large enough to tie over the top of the funnel and bag down into the funnel enough so that it will hold a pailful. Put the funnel into the barrel or keg tight, then draw from the extractor a pailful and empty it into the funnel. While that is straining you can be extracting more. When the barrel is full, bung it up and let it stand in the honey-house, or any other dry room, until ready to ship.

But in the season of 1897 the honey was thin when gathered by the bees, and during basswood bloom it came in so fast that the hives were full before any of it was fit to extract. After having used all the supers I either had to extract some to give them, or else let the bees lie idle while the honey was ripening. So, rather than have them idle, I extracted a few combs from each hive every two or three days, taking the best combs, or the ones that had the most sealed honey, each time, and stored it in kegs, and put cheese-cloth over the bungholes for ventilation; and yet, after taking all the care of it that I knew how, about 1,000 pounds of it soured.

Since having the above trouble, I have bought two galvanized sheet-iron storage-tanks holding about 1,800 or 1,900 pounds each, to use for holding honey, particularly any honey that I think is not well ripened before extracting. Then, after standing in the tanks a few days, or until I have to put more honey in the tanks, I draw it off from the bottom of the tank thru the faucet, and fill into barrels, or whatever I want to store and ship the honey in.

My experience is, that honey after standing in kegs or barrels will partially separate—the heaviest and best will be at the bottom of the barrel, and the poorest and thinnest will be at the top. These storage-tanks being 4½ feet high, give a good chance to draw off the best of honey, and leave the poorest in the tank; then what poor honey there is can be put by itself, and not have a little poor honey in every barrel.

For convenience in handling, I prefer barrels, kegs or kits. I have handled thousands of pounds in 60-pound tin cans, crated two in a case, and consider them the most unhandy and inconvenient package to handle extracted honey in that I ever used. It takes more muscle to handle them with ease than I have. You dare not end them over for fear of smashing the box; they won't slide worth a cent; and it makes me red in the face to pick one up and carry it. Barrels or kegs can be rolled into or out of a wagon quite conveniently, and 30-pound kits can be pickt up one in each hand and carried easily.

I have shipt honey to 10 or 12 different States, and I have had no reports of leakage or loss in shipment, consequently I have not had much experience (that is, not much *bad* experience). Before shipping I always drive the hoops tight, then nail the chime hoops with three or four penny nails. I drive the bungs tight, and saw them off even with the head. I put plain directions on the shipping-tag, and tack it fast to the head of the barrel. G. W. Wilson.

Vernon County.

Selling Honey.

To one who would engage in the pursuit of bee-keeping the numerous text-books supply all the needed information as to how to handle bees so as to attain the best results. But when the crop is secured, these same books fail to give any instruction as to how that crop is to be disposed of. The reason is obvious: Different circumstances and different localities require different methods. It is not, therefore, my purpose to lay down some set rules for the successful selling of honey, but rather to give some results of my experience in that line, hoping, in the discussion that will follow, to profit by the experience of others.

And at the start I would submit to you the proposition that honey is not a staple but a luxury. While it is true that some people use it daily, and may regard it as an article necessary to their table, it is also true that such people are like angels' visits—few and far between. In my whole acquaintance I know of but two, and they both belong to the same family.

While times are good and money is plenty one can dispose of honey very easily, but let the crops fail, and economy become necessary, honey will always be found among the first articles to be put on the retired list. Such being the fact, it follows that in the case of honey, more than in that of any other article of food, customers must be hunted after and not waited for.

For me, it has always been easier to sell comb honey. There may be several reasons why people prefer it. In the first place, because of the looks, for what is prettier than a nice, full section of white honey? And that leads me to submit another proposition: With very few exceptions honey sells more by looks than by taste.

Then, comb honey, if properly cared for, will not change its appearance, while the extracted will after awhile candy, and whenever that happens, people look on it with more or less suspicion. I have had store-keepers tell me that my honey had soured(!). Getting them to put it on the stove a few hours soon convinced them of their mistake. Besides, the flavor of comb honey will not be affected by the lapse of time, while the extracted will after awhile be found to have a different flavor from what it had at the time of extracting. (On this point my experience is limited to basswood honey.) Then it has a mild flavor; for me it is the most delicious honey in the world; later on it takes a strong minty flavor, which is disliked by those who are not used to it.

In order to realize a good price for comb honey, it is essential to have it reach the market in good shape. I have found that 12-pound cases, showing three sections, are preferred in the large cities. Such I fill with sections of the same quality, putting the nicest side next to the glass. I always make it a point to so arrange it that the sections can be taken out easily, nailing the covers with smooth nails, not larger than one inch. I ship by freight always, using crates holding 18 cases, which crates have handles, and my honey has always reacht the market without breakage.

I mark the boxes with my name and address, and weight, putting it an ounce or so below actual weight, for honey will lose a little if kept three or four months. I have never yet used labels on sections, but I am inclined to think that it would be a help, and propose to give them a trial next season.

In disposing of my crop I have had the best success while working up my home market. For the same kind of honey I often get a better price than in the large cities, and certainly so if I count the commission, which I save by being my own salesman. Besides, the home market does not grade honey so closely as commission men do. In my neighborhood only two grades are recognized—the dark and the white, with a difference of only two cents between them.

Another thing in favor of the home market is its steadiness; mine has not varied more than 2½ cents in nine years for comb honey, and has been at the same price for extracted.

The home market is also the place to dispose of all the off grades. Once I sold about 400 pounds of such to a store at 7½ cents a pound. It netted me a little over $30, which I thought was better for me than extracting or feeding.

What I said about the home market for comb honey will apply equally well to extracted honey. One that has never tried it will be surprised to find how much extracted honey he can dispose of in his own neighborhood; but to succeed one must be persistent, neglecting no one, for in the same town some stores would have a constant sale for my honey, while others would not handle it, having a different class of customers.

The style of package used may have some importance. After several trials I prefer now the one-quart Mason jar. It will show off the honey to the best advantage, and when empty it is always useful to the buyer. If kept too long, and it candies, I replace it at my next visit. I believe that honey would sell more freely in a smaller package, that would be retailed for 10 cents, but a great objection to such is their increast cost compared to the value of the honey. I once tried glass tumblers with tin lids, but altho I sold a goodly number, I soon gave them up on account of the work involved in filling them. Muth's glass bottles, which might do for a fancy trade, would not sell in the country because of their cost.

It has always been easier for me to effect sales after becoming acquainted with prospective customers, for I found the fear of adulteration very prevalent among the people, and there has been good ground for that feeling. To my own knowledge a Milwaukee firm has sold a large quantity of so-called honey, put up in pint jars, selling it at the same price I was offering mine. I have found it in Watertown, Jefferson, Fort Atkinson and Whitewater. Since the new law has taken effect, it has almost disappeared, for it has to be labeled adulterated or mixt.

After the home market has been supplied, and there is some honey left, one may have to send it to the large cities to be sold on commission, but I would do it only as a last

resort, as I cannot say that I have ever been entirely satisfied with the result. In trying to find a new outlet for my crop I even shipt some to Europe. What induced me to do so was the high prices obtained there. While on a visit to Switzerland two years ago, I saw extracted honey sell for 24 cents a pound, but my attempt was not entirely successful. I had sent basswood honey, but most people did not like its strong taste. I think the result would have been different if I had shipt clover honey, as I had at first intended doing.

We have seen the price of honey getting lower year after year, until it is very near the point where the price obtained will hardly cover expenses. I attribute it to the fact that production has been greatly increast with the better knowledge of apiculture, while the consumption has not kept pace with it. How to find a remedy for this state of affairs is a problem that is very important to the bee-keeping fraternity. A more equal distribution of our crops after securing them, and more reliable reports of the yield in different parts of the country, would, I think, help us greatly in answering this hard question. And I indulge the hope that the honey exchange, which is being tried in California, may be found to work well, and its operation be extended thru the whole country.

Jefferson County. GUSTAVE GROSS.

[Concluded next week.]

The Afterthought.

The "Old Reliable" seen through New and Unreliable Glasses.

By "COGITATOR."

PERCENT OF WAX IN COMB HONEY.

Of course I see Mr. Aikin's invitation, on page 227, to get down on my knees—and play checkers. Thank you, Mr. A; but I do not kneel at games—except possibly when seeking to win a queen—and there are no queens in checkers, I believe. Well, I honestly got it that you claimed it took three pounds of wax to fill the sections holding 25 pounds of surplus. You didn't say so. What you did say was reasonably clear—two pounds below and *one* pound in the sections—and yet I didn't "catch on." At the time I penned that criticism I think I must have been forcing myself to write when my mind was not in condition for any such business.

A CASE OF KEEPING ALL COLONIES WEAK.

Singular that Prof. Cook, who has done so much to popularize the motto—"Keep all colonies strong"—should, on page 194, come to the front with the advice to keep all colonies weak (in famine times in a warm climate); but it looks as if he was right in this reversal of the doctrine. That young queens reared in famine times would be better than the old ones is not quite so clear, but may be all right if the apiarist "knows the ropes."

BEES ON PEACHES ALL NIGHT.

Mrs. Axtell's observation that bees at work on peaches some times seem stupid, and often stay all night on the fruit, is of interest. It is well known that the leaves and kernels of the peach carry considerable poison; yet we should hardly expect the fruit to contain enough to stupefy bees. Whether she would have succeeded in getting peach-juice and white-sugar syrup mixt by feeding the latter when they were gathering the former—well, next time she must try it and report. You see they *might* abandon the peaches if they had syrup enough to store. Page 195.

TIME NEEDED FOR GREAT REFORMS.

I wonder if Doolittle isn't drawing it too fine, on page 196, when he says that the effort that the thief puts forth in gaining his swag is *not labor*. Some of our brothers and sisters in the craft, who workt hard last summer, may take this grain of comfort, that it wasn't labor (produced nothing). But I suspect Doolittle is about right in his main contention. In this one matter he's a little "off," I think, *seeming* to blow cold on anti-adulteration efforts. Bee-keepers alone, without joining teams with the rest of humanity, could abate the adulteration evil to a great extent. As our interests all lie in that direction, it looks like a *practicable* scheme. A scheme that cannot succeed till it has a majority of the entire electorate enlisted looks, if not impracticable, at least rather remotely practicable. Big job to right our political and financial evils—even as it's a big job to put down the liquor evil. All these things will be set right some day; but to say, Stop catching that one lark till the sky comes down and we get all the larks—well, that's the style of some people, but not a wise style.

FEELS LIKE DOFFING HIS HAT TO A HIVE-MAKER.

I feel like taking off my hat to Mrs. Griffith (page 206). To make in one day six hives all ready to paint by sawing and reconstructing dry-goods' boxes is a remarkable achievement for a woman coming 70. I am not a woman, and not 70; but I am such a mechanical "non-possum" that I fear I should require a whole day to make one—and then it wouldn't be a good one. And I'm not advising the sisters to follow Mrs. G.'s method of providing a supply of hives, unless they feel strongly inclined that way.

LETS SCOLDING BEES ALONE.

On the question whether to knock down persistent scolders or not (page 202, paragraph 9), my experience favors letting them alone. Rather seldom do I get peace by killing them. Kill three, and directly there'll be four or five.

THE V-EDGE HOFFMAN—A HIVE-LEVER.

Comrade Davenport's argument against the V edge of the projection on the Hoffman frame seems to be valid. Bees quickly put on propolis enough to make it as thick as the corresponding edge is. Then it catches bees fully as badly as all square edges would, and cannot be cleaned nearly as well. Page 209. But I laught when I heard him say of his pet hive-lever and hook, that its *main* advantage was that it could be hung on the edge of the hive. Probably he didn't mean exactly that.

TO PREVENT SWARMING MUST PREVENT QUEEN-CELLS.

I guess Edwin Bevins is right, that to prevent swarming we must prevent queen-cells. With these once tenanted, nothing short of a long spell of very bad weather will cause them to be torn down.

KEEP POULTRY OUT OF THE APIARY IN WINTER.

W. W. McNeal sets us a wise saw when he tells us not to let fowls use the apiary as a loafing-ground in winter. They thump around the hives to such an extent that many bees come out of the cluster and perish. Page 211.

CANDYING OF GOOD, WELL-RIPENED HONEY.

H. P. Wilson thinks that "good, well-ripened honey is slow to candy." Probably right, if the strict meaning of the words is adhered to; but some may use those words in the sense that good, well-ripened honey doesn't candy at all. If that idea should be pusht, there would be a numerously-attended row in our camp directly. Page 212.

QUEENS REARED IN SMALL COLONIES.

I see on page 213 the Chicago convention wrestled with the question *why* queens reared by just a few bees are inferior—too cold—too small a supply of food. Perhaps I can add a little (to the theory, that is.) The queen-larva is capable of taking a large share of its food by absorption, right thru the pores of the skin. In so far as it feeds in this way it can select—or perhaps "filter" would be the better word—taking the richer parts of the jelly and leaving the grosser; and thus the great lot of jelly left is not entirely waste, as it looks to be. Diminutive colonies never supply jelly in such plenty—it's "eat what's set before you, and eat it all."

THE HONEY-DEW DR. MILLER DRINKS.

I'm afraid Dr. Miller's example, in using granulated honey-dew in preference to sugar in his coffee, will not be followed largely enough to create a market. Interesting to see that there is such a honey-dew product that can be so used by a good judge.

COWS EATING SWEET CLOVER ROOTS.

I think the most unique and interesting thing in the beedom boil of page 218, is the sweet clover paragraph—those cows that for weeks pulled and ate sweet clover roots from the plowed ground. Nature is not inclined to waste its weapons. There are no thorns on roots; and if any

taste is simply for defense, to disgust above-ground eaters, it would not be surprising if roots should be free from that taste.....I've just been out to get a sweet clover root to eat. I find the leaves have the most pungency, the stems somewhat less, the roots still less, but yet not free from the distinctive flavor of the plant. The roots seem to have a *sweetness* in addition, which probably "fetcht 'em." But if I were a cow I'd be *ashamed* to kick at either leaves, stems or roots.

JOSIE THE HONEY-EATER—HE OR SHE?

That 13-year-old Josie, on page 222, who oft eats a pound of honey just for appetite's sake—is Josie a boy Josie or a girl Josie—that's what I want to know?

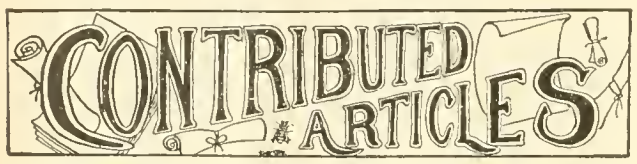
HONEY IN PRESERVING FRUIT.

Bevins' trials of honey for preserving fruit (page 221) seem to show that it will work in the style of extra-sweet pickles, but not alone on raw fruit. I made some grape-jelly with honey last fall—damaged the honey, without benefiting the grape-juice to any great extent.

FRUIT-BLOSSOMS AND BEES.

I protest (with due modesty, of course) against the first editorial quotation on page 217. It's an ancient chestnut to begin with—and, to end with, all bee-folks ought to know that putting a hive of bees right under a tree does not secure its flowers any more bee-visits than if the hive was a quarter of a mile away. Field-bees rather *prefer* to fly a short distance. What kept the bees off that tree the previous 25 years is surely quite a mystery. Most bee-folks do know these things, after a fashion; but when political editors and other outsiders give us taffy we tumble, and lose our heads altogether too easily. The circulation of thinly-disguised nonsense tends to make the public think that all our claims are nonsense—which is far from being true—in fact, *some* of the claims of that quotation are O. K.

COGITATOR.



Spring Management of Bees in Large Hives for Extracted Honey Production.

BY C. P. DADANT.

A SUBSCRIBER desires my ideas on the management of large hives for extracted honey for six weeks previous to the expected honey-flow. I believe that my last articles on spring management would express the most important part of the system I would advise. To harvest large crops we need bees, and those bees must come at the right time. If the breeding of bees on a large scale does not begin till the opening of the honey crop, and if this crop is short, say three weeks in duration, the bees will have been reared to no purpose. It takes just about three weeks to develop a honey-bee from the time the egg is laid; and all, or nearly all, our naturalists tell us that the bee does not become an active field-worker till about a week after emerging from the cell, except in extraordinary circumstances, such as the departing of a swarm or the deprivation of the hive of its old bees by artificial swarming, which renders it imperative for some of the bees to volunteer in search of stores before the time set by nature. Thus the reader will see that about a month elapses before the bee is of use to its colony. Then it is fit that we should by all means induce an increast laying when we forsee a crop in the near future.

In late seasons, altho the inducement to lay is retarded by the natural circumstances, yet the impetus given is greater when it does come, for the reason that the number of blooms that come out at once is of greater variety. For instance, in early spring the willow is first to bloom, then comes the gooseberry, then the peach, then the apple, etc. These blossoms follow each other with intervals, during which the cool days again retard the laying, so that altho the inducements offered to the bees are oft-repeated, the alternates of cold and heat, of bloom and dearth, make the laying irregular. In a late season the weather warms up suddenly, but remains warm. The willow, the gooseberry, the peach, and the apple bloom so suddenly that one blossoming merges into another, and the push is steady and vigorous. So the disadvantages of a late season are somewhat made up by the steadiness of its action. In our locality we have never seen the vegetation so belated and so suddenly active as this year. The last of the snow disappeared April 10, and we thought we were about to see the latest fruit-blooming we had ever had. But by the 15th, or five days later, the whip-poor-wills were whistling in our woods, and the fruit-bloom is now as far advanced as in average seasons.

But if we can, by artificial means, by oft-repeated feeding early in the season, of small amounts of food, induce our bees to breed early, they will be the better prepared to increase their brood-nest at the first warm days, and the bulk of our bees will be hatcht out of their cells before the flow. This is the only secret of success.

Compare two apiaries in which different plans are pursued. In the one the bees are left to themselves without shelter, perhaps without sunshine if their location is in an unfavorable spot. Their supply of honey is scant because they have been too closely robbed by their owner the previous fall. They must stint themselves, they dare rear but little brood until they are sure of a coming harvest close at hand. They linger along, probably dwindle some in numbers, till the first bloom appears, but they cannot rear brood largely till there is actually some honey to be found in the bloom. With the best efforts that they can put forward they will not begin breeding to the full capacity of their queen until the opening of the real harvest, and they will be booming just in time to close the season with a small crop of surplus to their owner.

Now, the other apiary will give us a different story. The hives have been left with plenty of stores in the fall, they are well sheltered, they have all the sunshine that is to be had. The first warm days find them ready to work. They need not stint themselves since they have yet a surplus. So the least inducement in the way of pollen-bearing bloom encourages them to spread out, even tho no honey is yet to be had in the field. When the fruit-bloom begins they are sufficiently strong to give their queen the freedom of every comb, that is, sufficient warmth on every comb to enable her to lay eggs anywhere; they "horsewhip their queen," as some of our friends would call it. No, the queen does not lay any more in that hive than in the hives of the late-breeding apiary if the hives are of the same size, but she lays at the right time. The push comes so that the hatching bees are in time for the feast, and help harvest the crop instead of helping consume it.

There is nearly always an interval of about three weeks in this latitude between the fruit-bloom, which only incites breeding, and the real honey crop from clover, basswood, etc. It is during this interval that the thriving colony builds itself, and it is only the colony that thus builds itself, upon which we may safely depend for a bountiful harvest and a reward for our cares.

I think I have said enough to show what is needed previous to the harvest. In another article I will speak of what is done when the harvest is on.

Hancock Co., Ill.

Large vs. Small Hives in Kansas.

BY WM. H. EAGERTY.

IN looking over the articles written by Mr. Dadant for the American Bee Journal, I wondered at his patience in making the statement so often in regard to the large hive as used by him. I have used both large and small hives, and I know that the bee-keeper is, and will be, pleased with the work done by a prime swarm when put into a hive of moderate size, and for the first season the swarm doing so much better than the bee-keeper expected, but from actual use of both large and small hives, I will take the large one, every time.

Of course, there is a difference between the work done here in Kansas, where we have no white clover, and our honey-flow is mostly from fall flowers with a fine flow from sweet clover and alfalfa. The bees here must be strong the whole season thru, and it takes a good deal of honey to carry the colony over winter, but those large colonies in large hives pay well for all the honey they eat; and while it takes them some time to build combs in the brood-chamber, they "get there" every time when the work is once over; while the old colony in the small hive has not room the second season for both brood and honey in the brood-

combs, and is short of bees for the field-work. Of course, in other localities, where the white clover is plenty, and the honey-flow is early and strong, a small hive can be used to good advantage, and the bee-keeper who has never used one of our mammoth hives will be pleased with his small hive.

But take a hive holding 10 frames 10 inches or more deep, and 18 inches long each, and with a good queen—if there is any honey to be had, you will be very apt to get your share of it, and you will not have to lie awake nights figuring how to have your colony strong enough just at the right time. Your only wonder will be at the stream of bees as they come and go at the entrance of the hive, how the box can contain them.

I have kept bees for several years, and never extracted any honey, and I hear very much said about small hives being the best for comb honey, but I know the value of large hives and very strong colonies of the very best strain of Italian bees, for I think that there is as much difference in the quality of honey from different strains of bees as there is in the quality of butter from different cows that are fed in the same pasture. I am foolish enough to think that the bees "make" honey, adding an animal oil to the nectar while they pump it in and out of the cells of the comb. But of course I know they cannot change it very much in one of those very fast flows, as from linden or clover.

Republic Co., Kan.

The Longer Tongue Gets the Best Nectar.

BY A. B. BATES.

THERE may be perplexities in the communication I wrote on page 19, and there may be something like discordance in the third paragraph that seems fatal to the facts embodied in the article, as Mr. Bevins claims on page 134, but I am frank to admit I am unable to see it.

If I am correct in the statement, that nectar is heavier than water, I am also correct in the statement that the richer of the saccharine substances settles to the bottom of the flower-cup.

Since Mr. Bevins does not doubt the superior quality of the Italian product, but seeks to find the cause, I will refer him to the bee's tongue as the only cause that seems to me possible. While some blacks may have longer tongues than others of their own class, and while the very best of this black race of bees may equal or excel the poorest of the Italians, it does not signify that the Italians as a class do not excel largely the blacks as a class.

The tongue of the bee is certainly its most important factor in the work of honey-gathering. The long-tongue strain, in my opinion, lives longer, stores more honey, and of a rich quality in flavor and in sweetness than does the short-tongue strain; and when we find a colony of bees surpassing another with like strength and opportunities, in quantity, we may find like excellency in the quality of their honey also; and had we the ability or means to do so, we might locate the cause in the tongue.

Now, Mr. Bevins (I suspect you being a member of that order that you say is seeking more light), let us reason together, and it may be that the hood-winks may fall from our eyes.

When there is a meager secretion of nectar it remains in the bottom of the flower-cup, and if the bee's tongue is too short to reach it, you know the result. If the bees can barely reach it without any margin to go on, they must visit so many flowers before they can fill their honey-sacs that their pent-up energy, that constitutes their lives, is exhausted, and the honey stored being gathered from the watery part of the nectar is inferior both in flavor and in sweetness. The longer-tongue strain being able to reach to the bottom of the flower-cup fill their honey-sacs from a few blooms, with a richer quality, and with probably less exhausted nature, less wing-splitting, etc.

Regarding the flower-cup that is inverted or turned downward, how do they compare with those that turn upward, for it is the general bloom that we are to look to and not the exception? I have not been as observing as I should be, but I believe the basswood bloom is turned downward, and in the nectar-secretion by this bloom all strains have the same tongue ability, and should you find the quality to be the same coming from this source, and that the quantity is altogether conditioned to the population of the colony, will you not believe that the long tongue is the cause of the superior quality of honey stored from the general bloom in favor of the Italians?

Franklin Co., Mo.

Section-Cleaning Machines—Some Experiments.

BY C. DAVENPORT.

AS I have spent considerable money and time in making and experimenting with section-cleaning machines, I will describe the results and conclusions I have arrived at in regard to them, for by doing so it may save others time and expense in going over the same ground.

In the first place, tho, it seems locality must make a difference as to the kind of propolis gathered, for sandpaper of any kind, no matter how fast the disk or wheel is revolved, is entirely impracticable for removing such glue as is put on sections in this locality, either when it is first gathered or years afterwards.

Some time ago an article in the Bee-Keepers' Review described how the writer met with success by using an emery wheel. While there are, if I am right, about 20 kinds or grades of emery wheels made, none of them would, I think, be of any account for removing such propolis as we have here. I tried three different grades of them, and they were worse than worthless, if I may use such a term. If the glue was soft the wheels gummed up; if hard, the emery had but very little effect on it. I also made moulds, and cast a number of wheels out of different kinds of sand and cement; these were all worthless so far as removing propolis was concerned.

I next took a wooden roller about $2\frac{1}{2}$ inches in diameter and set steel knives in it about $\frac{1}{16}$ of an inch apart, and had them project about $\frac{1}{17}$ of an inch above the wood. These knives were pieces of thin sheet-steel, and were let into the wood by means of saw-kerfs, and fastened and held in place by cement. A disk of this kind, if made accurately, and hung so it revolves true, will, if run very fast, remove propolis from sections very rapidly. It never clogs up, even if the glue is so soft that it is difficult to clean the sections by hand, tho when the edges of a section are held against it, care has to be taken or the knives will catch on the corners and instantly tear the whole section to pieces.

I also made a perforated-tin disk, as described by a correspondent in the Bee Journal, and altho this would remove propolis quite rapidly, it was not nearly so effective as the knives. Tin being such a soft metal it soon wore down so smooth that it was of no account. Tho it is considerable work to perforate tin for this purpose by hand, it could no doubt be done very cheaply by machinery, but I feel sure that no really practical machine can be made to run by foot-power, that is, on the same principle as a sewing machine.

I tried sewing machines and a small turning-lathe, which was about the same thing, and there is not power enough to do effective work. I tried putting on a heavy balance-wheel, and while this was considerable help it fell far short of being enough so that practical work could be done. As probably all know, foot-power as applied to a sewing-machine treadle, is what its name implies—simply foot-power generated by the moving of one or both feet up and down. But there is another kind of foot-power that is obtained on a different principle, by the use of a long treadle that has a long sweep up and down, so that instead of being able to apply only actual foot-power the weight of the whole body can be brought to bear on the treadle. I saw and ran a large turning-lathe of this kind in a machine shop a short time ago, and I should judge that the power was about twice what could be obtained from a sewing-machine treadle, and more easily obtained at that, as nearly as I can tell from the picture of it. The Barnes' saw has this same kind of power, and if I am right in my estimate, that this kind of treadle gives double the power a sewing-machine treadle does, it will be ample to clean sections, and with power enough a disk or roller set with knives, as I have described, will clean at least three while one could be cleaned by hand; and the roller could be long enough so that one end could be covered with perforated tin, or something similar for cleaning the edges.

If I have a crop this season I shall give the matter another thoro trial, for when I have a crop the item of cleaning sections is no small one with me, for here 500 sections a day is more, on an average, than one person will clean. I have myself cleaned 600 a day. I have also workt just as hard on 400 a day—it depends upon the amount and kind of glue there is on them, and here the amount depends largely upon the character of the flow. If it is scant and irregular, much more propolis will be gathered than when the yield is free and regular. The kind of surplus arrangement also has some influence. Sections from T tins are harder to clean than those from section-holders. The bottoms of the former will be badly stuck up and soiled even

under favorable conditions, while the latter, no matter how adverse the conditions are, will have but two slight ridges of glue—one on each side of the insets.

As I am afraid practical machines for cleaning sections will not be in general use at least this season, for the benefit of beginners only I am going to say a few words about cleaning sections by hand, for I can remember the time when I could not clean nearly as many as I can now.

Most of those new to this work hold the section in one hand while cleaning it, and I even know a man who had produced tons of comb honey who said he knew no better way. It is, however, quicker and easier to clean a section if it rests on a solid bench, and if much of this work is to be done two benches of different heights, so that one can change off and work both standing up and sitting down, are a great help. On top of the bench tack a piece of board that is two or three inches wide, four or five long, and about ⅛ of an inch thick. Have it back a few inches from the front of the bench. Stand the section on this strip so that the front projects over it a trifle, then scrape up and down, not across the top. The object of the thin board on top of the bench is to let the edge of the section project over it so that the knife can reach clear down. Of course, the same effect can be obtained by letting the section project over the edge of the bench itself, but if this is done their is nothing to catch or stop the downward strokes of the knife; and this makes it harder work for me. Some, tho, prefer to let the section project over the edge of the bench itself.

There is quite a knack about cleaning sections by resting them on a bench or table, but after it is acquired one can, if the sections are badly stuck up, clean at least a third more than by holding them loose in the left hand.

I prefer a knife the blade of which is stiff enough so that there is no spring in it whatever. Mine are made from small flat files; one edge is drawn down thin and sharp, and the other is left thick, and is ground square across; this edge is used mostly for cleaning the edges of the sections. The knives are long enough so they will reach clear across and clean the edges of two sides at once.

Southern Minnesota.

An Experience with a Queen and Nucleus.

BY EDWIN BEVINS.

I HAD an experience with a queen and nucleus last fall which was a little out of the ordinary, and which may be worth relating. Early in October I found a colony queenless, and resolved to re-queen by first giving the queen to a nucleus of hatching brood, and then gradually changing the frames of the colony to the hive of the nucleus.

Looking around among the colonies in the yard I found where the frames of brood could be easily gotten, and then sent for a queen. As there were evidences that a few bees had hatcht from the combs, I did not fear any trouble, altho I thought it might be a little late in the season for such operations.

When the queen arrived I was so ill that I could hardly crawl from the house to the bee-yard, but as there was no one else around who knew what to do, I had to go. An assistant helpt me to get the frames of brood and put them into another hive, and then I had him place the hive over the hive of the queenless bees, first putting a frame with wirecloth nailed to both sides between the two hives. Then I releast the queen and escort by turning back one end of the wire covering of the cage. The cage was left on the wire covering of the frame close to the frames of brood. Then I crawled back to my bed.

About the third day after, feeling a little better, it occurred to me that I would better look after my queen and nucleus. I was not greatly surprised to find that no bees had hatcht, but was surprised to find the queen in the cage instead of on the combs. I made her get there, and removed the cage from the hive, and then felt a little puzzled about what to do next. What I did do was to take the frame of wirecloth away, thus admitting the bees of the colony to the combs of the nucleus. I knew this would be all right for the brood, but did not know how it would be for the queen.

By this time I was used up, and again crawled back to my bed. It was two or three weeks before I could get out again, but the first thing I did was to find out what had become of my queen. I found the brood in the two frames of the upper story all hatcht out as expected, and, looking further, I found sealed brood in several frames of the lower story.

Ordinarily there is no risk in introducing queens on frames of hatching brood. What rendered it hazardous in this instance was the coolness of the weather which prevented the hatching of the brood.

A direct introduction of the queen to the queenless bees in the beginning *might* have been as successful, but I have had many losses by trying to introduce direct to the bees that have been for some time queenless. Probably the presence of the brood, and the fact that everything in both hives had become scented alike, helpt to insure the queen a kindly reception.

Decatur Co., Iowa.

Holding the Breath While Handling Bees.

BY A. P. RAYMOND.

MOST bee-keepers, probably, have discovered that nothing is so offensive to bees, and so angers them, as a person's breath.

If any one doubts this he can easily convince himself by removing from a hive a comb covered with bees, and breathing upon them. I think just one trial will be sufficient to remove his doubts as to the truthfulness of the above assertion.

Very early in my experience in handling bees, I began and continued the practice of holding my breath while looking for queens upon a comb, or while peering into a hive for the same purpose—in fact, while performing any other difficult task that had a tendency to anger the bees. I thought I saw good results from doing this, consequently, as I said before, I continued the practice until it finally became to me "second nature," as it were. Whenever I was engaged in removing combs from or returning them to a hive, I would find myself unconsciously holding my breath, especially if the bees were inclined to be irritable. Of course, it would become necessary to breathe occasionally, but when doing so I would turn my head aside so the bees would not observe the least effects of my respiration. By first filling the lungs, a person may, after a little practice, hold the breath for nearly or quite half a minute without inconvenience.

My only reason for holding the breath while handling bees was simply to prevent angering them; but recently I came across the following item in the Minneapolis Journal Almanac for 1897, which, if true, sheds more light upon the subject, and, also, may be another explanation for the seeming good results I experienced from the practice. I have not as yet tested this theory as relating to stings, consequently I cannot vouch for its truthfulness, but I give below the article in its entirety for what it may be worth. I am unable to give the name of the author. Here it is:

JUST SIMPLY STOP BREATHING.

"It is a fact not generally known that if a person holds his breath wasps and bees may be handled with impunity. The skin practically becomes a coat of mail against which the insects vainly drive their stings. The moment a particle of air escapes from the lungs the stings will penetrate. In explanation of this curious fact, a well-known physician advances the theory that holding the breath partially closes the pores of the skin, and thus leaves no opening for attack. This interesting statement explains and enhances the value of a practice I have followed for the prevention of colds. For many years my occupation took me to crowded political and labor meetings, generally held in rooms destitute of any means of ventilation. The heat was intense, the air fetid and poisonous. I have left such meetings bathed in perspiration and plunged into the chill air of a winter's night, thereby running the risk of catching the severest cold. Yet, strange to say, I enjoyed a singular immunity from such aggravating ailments. At the first touch of cold air I took a deep inspiration, and then held my breath for half a minute, in the meantime walking as fast as I could. During that half minute the pores of the skin were closed against the chilling atmosphere, and by the time the lungs called for reinvigoration, the body had considerably cooled, and the risk of a chill was over. I recommended the practice to public speakers, vocalists, entertainers, and those who are obliged to frequent unduly heated rooms. In my own case the practice never failed, and altho I fully believe in its value, I never understood the reason of it until a learned scientist came forward with the remarkable theory that while holding the breath the skin could be maintained impenetrable to the sting of a bee."

Holding the breath to avoid colds has been practiced, I think, by many persons with good results. What is nearly or quite as good, when emerging from an over-heated room into the cold, crisp atmosphere of winter, is to close the mouth for a few moments and breathe thru the nostrils, as the air thereby becomes partially warmed before coming in contact with the lungs.

If holding the breath is a sure preventive of bee-stings, every bee-keeper should be acquainted with the fact. Suppose you try it, this spring.

Clark Co., Wis.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Supplies Enough, Perhaps—Transferring.

1. I have six 8-frame Langstroth hives, 1½ stories, complete with sections and starters. Five of the brood-frames in each hive have full sheets of foundation, and three have 3-inch starters. I have one colony of bees in an odd-sized hive, which I will transfer and make two colonies, on the Heddon plan. I will then have four empty hives. I will get first swarms in three of those (from a neighbor.) The question is, have I enough supplies for this summer? I have a good location for bees.

2. In transferring, can't I set the hive I want the bees in, over the old hive and drive them up into it, as well as to drive them into another box and empty them in front at the entrance?

3. Will there have to be queen-cells in the old hive before I transfer in order to make the second drive into another hive? IOWA.

ANSWERS.—1. In all probability you have supplies enough, unless it be for surplus, about which you say nothing. If the season be favorable, you ought to need some sections or extracting-supers.

2. That will be all right if your hives are constructed to make it convenient.

3. It isn't absolutely necessary, but you'll have better queens if started for swarming than you will have by forcing a weak colony to start cells.

How to Get Along Without Transferring.

I have six colonies of bees in common boxes, nailed all around. I am a beginner and know nothing about transferring. I am told by experienced bee-men that I will probably fail and sincerely regret it if I should attempt to transfer. The experienced bee-men are too busy with their bees to do it for me. I have three or four swarms that I caught the other day, in 10-frame Langstroth hives. If there is any way of making the old colonies help these new ones, or nuclei, swarms that I may form from the new ones, without getting the old ones out of their old hives, say for instance by changing stands, I should be very glad to have you tell me. I have one small new swarm. I thought to change places with it with one of the strong old colonies, but feared for the queen of the new swarm. CALIFORNIA.

ANSWER.—Some who do not care to transfer manage very profitably by keeping their colonies in box-hives as breeders. Wait till the bees in a box-hive swarm. Hive the swarm in a frame hive, setting it on the old stand and the old hive close beside it. In six or seven days remove the box-hive to a new place, at a time of day when the most bees are out. This will throw a large number of bees from the old hive into the new one, making the latter good for a big surplus. You may leave the old hive to breed up for winter, or you may drum out the remainder of the bees 21 days from the date of the first swarm.

Fears Foul Brood from Dead Brood.

In the first place, about Jan. 26, or a few days before, there was a warm spell here and a maple-sugar camp was opened, and the bees carried in some sap which caused the queens to lay from two to four frames of brood; then I believe the cold weather commenced on the 26th and continued until about Feb. 14, and that remarkable cold weather was during that time; a number of colonies were caught on one side of the hive when the brood was away from the honey. Each colony that died had from 15 to 30 pounds of honey. Now the question: This brood has been hung up and dried in the combs. Would you be afraid to use these combs to put into hives to hive swarms on, or to put in colonies now in place of combs that have drone-brood in them? Would you be afraid of foul brood?

You understand that so much is said pro and con about dead brood starting foul brood, by the bee-keepers of eminence, that it is hard for a man who never had a case of foul brood to understand what to do. Some claim dead brood will, and some say it cannot, start foul brood. OHIO.

ANSWERS.—If I had such combs, I would most certainly use them, and would have no anxiety as to results. Whether it would be safe for every one is another question. In my case there is no foul brood in the vicinity, and has never been any. In a place where foul brood is more or less common, there would be danger that some of the colonies which died on these combs might have been infected, making it unsafe to use the combs. But if I thought there was no foul brood in those combs at the time the bees died on them, I wouldn't hesitate to use them. Even those who believe that foul brood may start spontaneously would hardly object to it, for you say the combs have been kept dry, and I think no one has ever claimed that foul brood could originate from dead brood unless it was moist and rotten. I've used hundreds of combs containing dead brood, and never had any harm from it.

Moving Bees a Few Rods—Feeding for Pollen—Candied Sections of Honey—Frames of Comb and Dead Brood.

1. I have 16 colonies of bees, wintered in the cellar. I took them out April 1. My bee-yard was full of snow, so I had to put them in the garden about four rods away. I will have to move them just as soon as I can hear from you. What time of day is best to move them, and what can I do to keep them from returning to the old stand?

I have been feeding them some corn-meal and sugar-syrup in a tin-pan—one-third sugar and two-thirds water. The 16 colonies will carry away three gallons a day. Can I give them too much of it?

3. I have some sections of candied honey that are not finisht. What can I do with them?

4. I have some brood-frames of comb and some dead brood in them. Can I use them this summer? MINN.

ANSWERS.—1. It probably doesn't make much difference what time of day you move them. When you move them, take away all hives, stands, or anything that might make the place seem like home. After moving, set up boards in front of entrances, making it as troublesome as possible for the bees to get out, in hopes they will mark their entrances when they come out. If, in spite of all you do, some of the bees persist in going back to the old place, put a comb for them to cluster on, and in the evening give them to some colony that needs them.

2. There isn't much danger of feeding too much, altho you might look occasionally to see that too much of the imitation pollen is not stored. Of course it would not do to feed them so much of the syrup that the queen would be crowded.

3. Sprinkle with water, and let the bees eat them out.

4. Yes, but let the bees have them to take care of as soon as possible, by putting a hive full of the combs under a colony.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,

15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. MAY 11, 1899. NO. 19.

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Booming and Fighting New Things.—Editor Hutchinson speaks of the tendency of editors of bee-papers to favor unreasonably and also to oppose unreasonably the adoption of new things. He says:

"The beginner in bee-keeping who reads Gleanings alone would be almost certain to send his order for plain sections and separators. If he read only the Progressive or the Canadian Bee Journal there would be little danger of his experimenting with them."

Mr. Hutchinson thinks fences and plain sections lead to a more perfect filling, but thinks it possible some better way may be discovered than to use fences. And yet, if the fences and plain sections *do* accomplish something not heretofore or otherwise attained, why not favor them until that "some better way" is "discovered?"

Railroad Rates to Philadelphia.—Secretary Mason, of the United States Bee-Keepers' Association, sent us the following for publication, bearing on the railroad rates to Philadelphia, in September:

STA. B, TOLEDO, OHIO, April 29, 1899.

EDITOR AMERICAN BEE JOURNAL:—I see on page 264 you quote from the Chicago Record of April 14, that railroad rates have been fixt for the Grand Army Encampment at Philadelphia, in September, and that the "rate of one fare for the round trip from Chicago and all points in the Central Passenger Association territory" has been fixt.

Just let me tell you and your readers what the "Commissioner of the Central Passenger Association" wrote me April 25—11 days later than the date of the Record. The Commissioner gives me the name and address of the commissioners of the different passenger associations, and adds:

"I am unable to advise you as to what reduced rates, if any, have been establisht by the associations named, on account of the Grand Army Encampment. The details respecting rates from this territory (Central Passenger Association have not yet been definitely determined on, but it has been settled that a rate of one cent per mile short-line distance with a minimum of $11 will be charged for round-trip tickets sold from this territory, going and returning by the same route. Tickets will also be sold at slightly higher rates which will carry stopover privileges and an opportunity to vary the routes on going and returning journeys; and if you will write us again in about a month we will probably be able to give you definite and complete information."

Now that is better authority than the Record, and I assure you I shall let the readers of the different bee-papers know what the rates are just as soon as I can find out myself, but any one can learn what the rate will be from their starting railroad point by asking their station agent, but it may be three months yet before the agents will get their instructions. I expect to know officially about it before they do.

If the other bee-papers will copy the above, or so much of it as they think best, it may help some to an idea of the probable cost.

Philadelphia is about 600 miles from Toledo, and one of our leading ticket agents told me this week, that a round-trip ticket from here will cost $11.95. A. B. MASON.

Secretary United States Bee-Keepers' Association.

We supposed the Chicago Record had reliable authority upon which to base their statements, and it may be they are not so far wrong as they might be. At any rate, there is plenty of time yet to announce the rates, and all who will want to go will be able to find out definitely some time before the day they start. The important thing for bee-keepers to do is to begin now to arrange to be in Philadelphia Sept. 5, 6 and 7, when the annual convention of the United States Bee-Keepers' Association is held.

Thickness of No-Drip Cleats for Shipping-Cases.—Editor Root is in trouble to know how thick to make them. First they were made ¼ inch thick. Then there was a clamor to have them thinner, and they were made ⅛ thick. Now comes Byron Walker, a man who handles a great deal of honey produced by others, and says that the cleats should not be less than ⅜ thick. If thinner than that, there will always be some cases with so much leaking that the leakage will fill up to the bottoms of the sections. Mr. Root rightly says that the thin cleat is all right if the comb is fastened in the section as it should be, but when partly filled and poorly attacht it needs a thicker cleat to take care of the drip. Mr. Root, perhaps you'll have to go to the extra trouble of making ⅛ cleats for the careful ones, and ⅜ for the others. And yet there isn't much use in having two thicknesses.

A Foul Brood Law for Michigan is strongly urged by the Bee-Keepers' Review. Editor Hutchinson mentions what has been said about it in this journal, and urges every bee-keeper of the State to do all he can to urge the passage of the Bill. Altho bee-keepers of other States can do nothing to advance the passage of the Michigan Bill, they are personally interested in its passage, at least in every State that as yet has no foul brood law; for every State added to the list of those that have foul brood laws makes it easier to secure such laws in States not yet to the front.

"Selling Honey by the Section instead of by weight has been my usual method for several years. Most of the grocers accept this method very cheerfully, and, after experience with the plan, prefer it. Those who do not, generally like to buy by weight and sell by piece, because they are thereby enabled to squeeze out an extra profit. I use sections seven to the foot, with separators, of course, and they run very uniform in weight." So says J. A. Green, in Gleanings.

The Illinois Foul Brood Bill.—Secretary Jas. A. Stone, of the Illinois State Bee-Keepers' Association, desires us to publish the following statement regarding the effort recently put forth to secure a foul brood law in Illinois, but which unfortunately resulted in failure:

EDITOR AMERICAN BEE JOURNAL:—The Executive Committee of the Illinois State Bee-Keepers' Association desire in behalf of the Association to have kindly named all those who have assisted in an effort to secure a foul brood law for the State. We have found none more ready to assist than Editor York, of the American Bee Journal, and his letters to the House Appropriation Committee would have influenced a reasonable set of men, but we found the majority of that committee had no regard for reason, were not well enough brought up to give heed when our committee was being heard.

Mr. N. E. France, of Wisconsin, helpt us as far as was in his power, sending us pictures of apiaries destroyed by foul brood, and the hives all piled.

Mr. Dadant gave us letters of introduction to his senator, and the Bill was put in his (Senator Berry's) hands, and went thru the Senate booming—to be defeated by the Appropriation Committee of the House.

Mr. H. F. Moore, secretary of the Chicago Bee-Keepers' Association, did all he could to influence his representatives, as also did Mr. Jas. Poindexter, of Bloomington, but still we could do nothing with his representative—Funk. He insisted that the wild bees in the timber would hold the disease, and it would be useless to rid our apiaries of the disease as long as there were bee-treês in the timbers. Such flimsy arguments as this had their influence with the committee. And one of the committee-men said he was talking to one of his constituents who kept bees, and he told him he would not give a cent for such a law, as he never had foul brood in his apiary. These little things had their weight against us. But we had on that committee some of whom we are able to name: Chairman Curtis, Dr. Vincent, Messrs. Young, Rankin, and some others we are not able to name.

Among our enemies there were none more bitter than Stewart. He could not wait to hear from our committee, and moved (without the chairman giving heed) to report it back with the recommendation that it do not pass. Then there was another member that lookt at us as if he would say, "Just wait till I get a chance to swallow you!" We askt for a roll call, but were unable to get it. However, we will be able to get some of the names when we see their pictures.

J. Q. SMITH,
JAS. A. STONE,
CHAS. BECKER, } *Executive Committee.*

We trust that whenever any of those who opposed the Foul Brood Bill come up for re-election they will be remembered by bee-keepers, at least, in a way that they will not soon forget. It seems strange that nearly every other organization except bee-keepers can get what they want at the hands of the legislature. But so long as self-seeking politicians are often elected to make the laws perhaps we ought not to be surprised that the dear people "get left." However, as the votes of the "dear people" put the selfish politicians into power, the place to do the hardest kicking is at home. 'Tis better to elect men of sense than those who are after only the cents instead of the best good of their constituents.

Philadelphia's "Old Honey-Man."—The Philadelphia Record says that one of the queer characters of that city, who goes on in his own quiet way, and who has wealth enough to afford him all kinds of luxury, if he so desired, is known by every man, woman and child in the southern part of the city as the "Old Honey-Man." The queerest characteristic possest by this old fellow is his extreme reticence concerning himself and his past career. There are those who know that he was a sailor at one time, and, if he was not the captain of a ship, he was well up in the ranks. With a trayful of honey in the comb on his head, the old man traverses all the downtown streets and a few of the uptown ones, selling to all who care to buy. He has a list of regular customers among the old-timers, and his visits to these are made with the regularity of a clock. For years the "Old Honey-Man" sold bananas and honey, and amast a fortune; but years ago he gave up bananas, and since that time devotes himself to dispensing honey and sweet smiles, for the old man is very genial.

MR. DOOLITTLE says [in American Bee-Keeper] a wooden paddle about 5x7 inches is the thing to kill cross bees that follow one around the yard. He once tried a paddle made of fine wire-cloth stretched over a wooden frame, something like a sieve. But he says he can hit a bee just as well with the solid paddle as with one that allows the air to pass thru. The latter sometimes only stuns the bee, while the solid one always kills it.—Gleanings.

* * * * *

STENOG, who picks around among the neighboring fields of Gleanings, has this to say in reference to the word "alright" to which we called attention awhile ago:

"'Alright' is referred to as being possibly a new word. That's alwrong. Poor spellers often use it, supposing it follows the analogy of *already*. It is an eyesore to have such things thrust before us. But it is no worse than *sometime* as a word; as, 'He was here *sometime* ago.' *Sometimes* (an adverb) is always one word; but *some time* is an adjective and a noun. *Sometime* is obsolete. It used to mean *former* or *formerly*; as 'Monroe was *sometime* (once) president of this country.' Also *someone*, *noone*, and *anyone*, in place of *somebody*, *nobody*, and *anybody*, are gross blunders. If used they should be separate words."

We are agreed with Mr. Stenog on the word "alright," that it is "alwrong." But we wish he would unbend a little and pick up the reform in spelling which ourselves and others have undertaken. It wouldn't hurt him any to favor a little progress in this line, and some day he might be glad that he threw the weight of his influence on the right side.

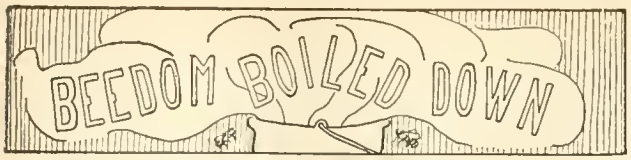
* * * * *

MR. A. I. ROOT is always an interesting target at which Dr. Miller enjoys shooting off jokes. Fair samples of the "wads" in the Doctor's "popgun" are found in the following, which appeared in Gleanings for April 15:

"*My dear old Friend:*—Please have my subscription extended. That's because I began with Vol. I, No. 1 of Gleanings. I think it began not so very long after the first visit I made to you. That was not long after you had had a fire, in 1870, and had your jeweler shop and dwelling all under one roof. Other company was there, somewhat crowding the sleeping facilities; you and I slept together, and you kept me awake detailing a plan that was in your head for putting a hive under each hard-maple tree, tapping the tree, and having the sap run directly into the hive for the benefit of the bees. You didn't manufacture smokers then, and I showed you how to smoke bees with a pan of hot coals. You liked the plan, and as soon as I was out of sight you tried it and burnt up a hive, or tried to. I think I've slept with you a number of times since, and was distinctly the gainer on at least two separate occasions, when you absent-mindedly put your nightcap in my overcoat pocket instead of your own. I never lost anything by sleeping with you. I always put my Waterbury under my pillow. Please don't forget to have my subscription extended. "C. C. MILLER."

There's no telling what mischief those two "boys" will get into at the Philadelphia convention, next September. But they'll bear watching. I hope Pres. Whitcomb will keep both of his keen Nebraska eyes on them. If not, they'll make "Uncle Whit" more nervous than he usually is when joining in an Indian war dance.

The Premium offered on page 254 is well worth working for. Look at it.



A Plan for Watering Bees is given in the British Bee Journal that may be very convenient for those who drink much tea or keep few bees. The spent tea leaves are saturated with water and put in a saucer in a sunny spot for the bees.

Sacks to Contain Melting Combs, C. Davenport says, in the Bee-Keepers' Review, should not be of any *woven* cloth, as this will leave a large portion of the wax in the slumgum, but should be *coarse, knit*, cotton stuff, like that in a cheap, but heavy, coarse, knit, cotton sock.

Difference in Queens.—S. F. Miller had seven colonies of equal strength: one of them filled everything full from top to bottom, while the others gathered no honey to amount to anything. The editor of Gleanings thinks the difference in results might be accounted for by the difference in queens. He says:

"We once had a colony in our apiary that would fill its hive full of honey when the other bees would be almost on the verge of starvation. Work? We never had anything like them. Rob? They would clean out anything they could fight down. The queen of this colony we called the 'honey queen,' and her daughters were sold at advanced prices."

Putting Section-Supers Between Stories of Brood-Combs, is advised in the Progressive Bee-Keeper, by R. C. Aikin, as a sure way of getting rushing work done in the sections. G. M. Doolittle says, in the same paper, that it is good practice to have an extracting-super between two stories of brood-combs, but it's a bad thing for sections, because the old, black comb from above will be carried down in bits to help seal the sections. Even with old combs below, the snow-white appearance of the sections will be affected. "To produce the most 'snow-white' honey in sections, it must be built over *new combs* below, or over combs of *sealed brood or honey* by *very strong* colonies."

Spring Feeding of Bees is discust in Gleanings by G. M. Doolittle. He objects to outside feeding, because bees for two miles around must be fed, because there is some danger it may start robbing, and because those which need the least may get the most. If a warm morning is followed by a chilly afternoon, bees may be lost by flying out, and at this time of the year one bee is worth as much as a hundred at the close of harvest. In early spring each colony should have from 10 to 15 pounds of honey, then they will need no further feeding unless the weather is bad in fruit-bloom. Instead of feeding nightly for stimulative purposes, he thinks it better to give full combs of honey, and if these are not at hand, then combs filled with sugar syrup.

Starting Bees in Sections.—The editor of Gleanings commends a plan for starting bees in sections given by Mrs. A. J. Barber. She says:

"I had 60 colonies of Italians in my out-apiary, and in trying my experiment I tried to be fair. I took 30 supers of half-depth extracting-frames full of comb from the home apiary, and put them on 30 hives in the out-apiary at the same time that I put sections on the other 30 hives. In four or five days the extracting-combs were full of new honey, and the bees excited and busy at their work, while most of those having sections were loafing, and some had swarmed. I raised the combs by putting a super of sections between them and the brood-nest. At the end of two weeks from putting on the combs those sections under the combs were better filled than those on the hives that had no combs. As soon as the combs were sealed I put them away to extract, having that amount of honey extra, and the bees started nicely in their work. I had only about a third as many swarms from those hives as from the ones with sections and no combs."

But those who have been in the habit of using bait sections will probably think it is no advantage to use extracting-combs in their place, unless it be desired to have extracted honey.

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GENERAL ITEMS

Bees in Splendid Condition.

My bees were removed from the cellar April 11 and 13, and are in splendid condition. I placed 110 colonies in the cellar Nov. 20, and they were there nearly five months. They wintered with a loss of two colonies.

I left 14 colonies on the summer stands, one of which died. Bees which were left on the summer stands in this vicinity have suffered a terrible loss. G. F. TUBBS.
McKean Co., Pa., April 22.

Bees Doing Well on Mesquite.

The information contained in the report of the Colorado convention in the Bee Journal was worth many times the subscription price, to practical bee-keepers who are trying to make a living from the business.

I have only 110 colonies at this date. We had a very dry fall, winter and spring—no rain since October. Swarming is some four or five weeks later than usual. However, my bees have been doing well the last week, gathering honey fast from the stable honey source of this dry region—mesquite—which is in full bloom now.
J. J. K. FITZPATRICK.
Dimmit Co., Tex., April 16.

Average 75 Percent Loss.

I lost 21 colonies out of 25; but I will not give up. Some of my neighbors have lost all. On an average the loss will be about 75 percent. C. L. HAMILTON.
Nez Perces Co., Idaho, April 29.

Last Season a Poor One.

Loss in bees in this section is heavy, owing to long, cold winter. Last season was a poor one, as it was very dry, and the grasshoppers ate most of the bloom of the second crop of alfalfa and sweet clover.
I. E. PALMER.
Mesa Co., Colo., May 1.

Fully Half of the Bees Lost.

Most of the bees in this section of country are now out of the cellar, and a large number of reports have been received, saying that as nearly as can be ascertained fully 50 percent of the bees died. I lost 100 colonies out of 261. Some of the smaller apiaries are entirely swept away. Just to-day I received notice from a prominent bee-keeper that has lost 100 colonies out of 140. Diarrhea did the work here.
AUGUST BARTZ.
Chippewa Co., Wis., April 18.

Bees Had a Severe Time.

Bees have had a severe time this spring, all old bees dying off in the cold weather in February, leaving the hives full of brood and young bees, and no honey coming in caused a cessation of brood-rearing, which has been disastrous to the early honey-flow. However, we have some very fine honey from tupelo. Next comes holly.
CORNELIUS L. RICE.
Vermillion Co., La., April 15.

A Laying-Worker Experience.

I am just making a start in the bee-business. I have three colonies that I wintered, and if it had not been for the book "A B C of Bee-Culture," I would been minus one colony soon. It was like this: In going over my bees not long since I found the brood to be all drones in one hive, and of course I got my bee-book and lookt it up.

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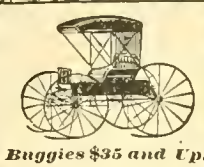

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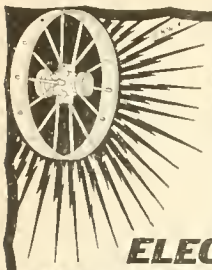

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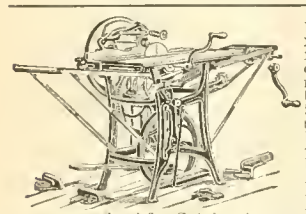

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and found the colony had a laying worker and no queen. I procured a queen, put her in a hive, placed it where the drone-hive was, removed Mrs. Laying Worker and her drones to one side, and now they are doing nicely. The bees all left the old hive but 10. I thought this pretty good.

There are very few bees in this part of the world. A. C. SMITH.

Columbia Co., Wash., April 16.

Just Rolling in the Honey.

Bees have been just rolling the honey in since April 15. We had fine rains all thru this country, so much so that I had an apiary of 85 colonies completely washt away from a place where the water was never known to run before. I will devote most of my energies to restocking for awhile now.

GEO. W. HUFSTEDLER.

Bee Co., Tex., April 23.

Heavy Losses of Bees.

About 90 percent of the bees are dead. Honey-dew is thought to have killed them. Much of the honey has a bad taste. One man put 51 colonies into the cellar and lost all; another lost 4 out of 80; and a lady had 18 colonies last fall and lost all but one.

I learned much last season from the American Bee Journal, and had hoped for a prosperous season in 1899.

A. J. CUSHING.

St. Croix Co., Wis., April 25.

Quite Heavy Winter Losses.

I see by the reports that the winter losses of bees were severe the past winter. In this locality the losses have been quite heavy. One man reports 75 percent loss (but I suppose he is excusable, as he says he can't learn anything by taking a bee-paper—knows too much. See?). But the bees that were packt wintered fairly well.

WM. BROBYN.

Weld Co., Colo., April 23.

Wintered Fairly Well.

Our apiary at home wintered fairly well, better than I expected, and most of the bees are in good shape; they are working hard on willow now. Some of my neighbors lost 50 percent, others all they had. I think long confinement and dampness was mostly the cause. What few are left will need careful watching to bring any good results.

Last year my sales of comb honey amounted to $100, besides the extracted. I run 20 colonies for the latter. My best colony stored 200 one-pound sections of comb honey, mostly white clover.

The American Bee Journal comes as regularly as day and night. It is just like all other good things—the more you read it the better you like it. I would not do without it. R. H. NORTMAN.

Jackson Co., Wis., April 24.

Clovers in Bad Shape.

As nearly as I can find out, of those bees that were left out-of-doors 90 percent are dead; of those in the cellar, 25 percent are dead. Starvation, poor stores, and diarrhea were the causes of those dying in the cellar; very cold, long continued, and starvation, were the causes of the loss out-of-doors. Clovers are in bad shape. The season is at least three weeks behind. Elm is in bloom, and cottonwood and box-elder will soon follow. E. C. WHEELER.

Marshall Co., Iowa, April 23.

Agreeably Surprised in Wintering.

I took my bees out of the cellar April 4, after a confinement of 138 days, the longest time I ever had bees confined. I had begun to lose hope in them, but I was agreeably surprised. They had daubed their hives somewhat, but most of them were booming with bees, and the queens had commenced

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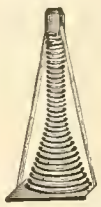

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MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

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to lay. They were pretty short of honey. I have been feeding them nearly every day since, giving them C sugar, and oats and corn ground for pollen. I tried them with buckwheat flour but they seemed to prefer the oats and corn. J. C. ARMSTRONG.
Marshall Co., Iowa, April 18.

Satisfied with the Results.

Last year was my first experience with bees, and I did pretty well, thanks to the American Bee Journal. I got 33 pound of surplus from the old colony, 19 pounds from the new colony, and a number of unfinisht sections. I think the honey-flow was cut off by dry weather, but I am not looking for so much surplus as some get that I read about in the Bee Journal. I was surprised at what I got last year, and I think by better management I can make them average that one year with another. I now have four colonies in good shape, having lost one in wintering. LEWIS LAMKIN.
Woodbury Co., Iowa, April 29.

Lost None in Wintering.

I have about all the live bees in this part of the country. The rest wouldn't read, and lost all. Mine are all alive and strong with brood in four frames to-day. I wintered them in the cellar. The Bee Journal is my guide, and will be. J. P. BLUNCK.
Webster Co., Iowa, April 28.

Working on Maple and Apple Bloom

Busy. Great rush of the season. Don't think I ever saw bees at work on maple bloom and apple bloom *simultaneously* before. Usually weeks apart. E. E. HASTY.
Lucas Co., Ohio, May 1.

No Spring at Dr. Miller's.

It's summer. Was no spring. Jumpt right square from winter into summer. Apples in bloom May 2; earlier than 1897 or 1898. April 29 the mercury stood at 91°!
McHenry Co., Ill., May 2. C. C. MILLER.

Good Honey Crop Expected.

We are having weather that suits the most exacting agriculturist; glorious showers have been falling for the past three days. They are light and will do immense good. I have no particulars from the South. The honey crop here gives evidence of being good, tho it may not be as heavy as I could desire. W. A. PRYAL.
Alameda Co., Calif., April 15.

Succeeding Well.

This is getting to be quite a bee-country. I commenced keeping bees last spring, and am succeeding well—all on account of the American Bee Journal, which I could not do without. H. T. WILSON.
Rice Co., Kan., April 29.

Bees Doing Well.

Bees are doing well now, storing honey from the "sugar-bush."
SYLVESTER PEASLEY.
McLean Co., Ill., April 27.

Severe Loss in Wintering.

Under the above heading, Mr. H. W. Dudley says, on page 251, that about 50 percent of the bees in Salt Lake County and other localities have died the past winter; and that Pres. Lovesy has lost all but four colonies. This should have read "all but four in the home apiary." Otherwise Mr. D. is very nearly right. Some have lost from 60 to 90 percent, while others have not lost 10 percent. Salt Lake County cannot be considered a bee-keepers' paradise. The wintering question seems to be the hardest problem. I never try to winter more than 10 to 12 colonies at the home apiary, and I

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

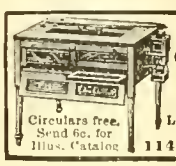
	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.



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Thousands in successful operation. Lowest priced 1st-class hatcher made
GEO. H. STAHL,
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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.
J. A. VAN DEUSEN,
Sole Manufacturer,
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EGGS FROM BARRED PLYMOUTH ROCKS
Thorobred — Fine Plumaged Fowls—Farm Raised—75 cents per dozen.
MRS. L C. AXTELL,
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Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT WAIT

Before placing your order, to send me a list of what you need in

Foundation, Sections,

And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.
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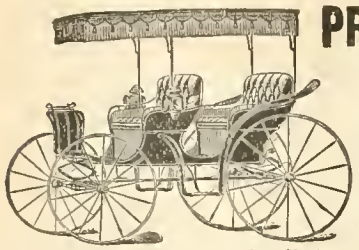

No. 717—Canopy-Top Surrey, with double fenders. Price, complete, with curtains all around, storm apron, sunshade, lamps and pole or shafts, $68; just as good as sells for $100.

PROFIT FOR MAKER ONLY.

We manufacture 170 styles of vehicles and 65 styles of harness and sell them to you direct from our factory at wholesale prices. In fact, we are the largest manufacturers of vehicles and harness in the world selling to the consumer exclusively. When you buy on this plan you pay **only the profit of the manufacturer.**

No traveling expenses, no losses, no agent's commission and no dealer's profits.

We Have No Agents,

preferring to deal with you direct. No matter where you live, we can reach you and save you money. We ship our vehicles and harness anywhere for examination and guarantee safe arrival.

We Manufacture Everything we sell,

and we can assure you of good quality from beginning to end; good wood work, good iron and steel, good paint and varnish, good finish, good trimmings, fine style and the largest selection in the land. **Large Illustrated Catalogue FREE.**

No. 130—Double Buggy harness, with nickel trimmings. Complete with collars and hitch straps, $20. As good as sells for $30.

Elkhart Carriage & Harness Manfg. Co. *W. B. Pratt, Sec'y.* ***Elkhart, Indiana.***

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Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery; and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

26 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **26** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each,	by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

usually lose about half of them, no matter how I fix them; while with the same treatment I obtain much better results elsewhere. I think the evidence is pretty conclusive that smelter smoke is the principal cause of loss, because at and near the smelters no bees live thru the winter.

We are having beautiful weather here, now; the hum of the busy bee is heard on all sides, the trees are in bloom, and all nature looks bright. The health of the people is improving, and all are hopeful for nature's stores in abundance. E. S. LOVESY.

Salt Lake Co., Utah, April 28.

A Leader with Poultry and Bees.

I have a friend that sells a little over $2000 worth of honey each year from 200 colonies of bees. Can any of your readers beat that? If they can I would like to hear from them. I also have a friend in the chicken-raising and egg business, and he tells me for some time back he has been getting 120 dozen eggs weekly from 300 hens. Can anyone beat that? G. T. JONES.

Sutter Co., Calif., April 26.

Small Loss in Wintering.

The Bee Journal is just the paper for beekeepers. I have 13 colonies doing nicely. I lost only one colony during the winter. They were on the summer bench with only a roof and the back closed, front open, and 18° below zero for a week in February.

J. W. MCFADDEN.

Nez Perces Co., Idaho, April 27.

Extractor for Shallow Frames.

I notice Dr. Miller asks for somebody who has had experience to answer Iowa's question about what kind of extractor to use for 5¾-inch frames, on page 247. This is just the size of my extracting-frames, and I use the No. 17 Cowan extractor. The comb-baskets are 11½ inches inside, so there is plenty of room for two frames. I use thin super foundation for shallow frames, and it is all right without wiring. I have 1,000 of these frames built with thin super foundation and no wire.

I think 75 percent of the bees owned by farmers in this vicinity are dead. My loss was 18 percent. Honey-dew was the cause of my loss, I think. H. H. PORTER.

Sauk Co., Wis., April 29.

Fruit-Bloom Sprayed Ignorantly.

We lost bees heavily just at apple-bloom time, and I know that our farmers spray their trees that I want to warn them not to spray while apple-trees are in bloom. I do not know that they do, but I am almost certain one or more seasons they did spray in apple-bloom, for those seasons there were scarcely bees enough left in the hives to take care of the brood, when at the very first day our trees bloomed our bees were strong, and in three or four days were very weak in numbers. Of course, no one who knew it would kill bees would do so; it is done in ignorance.

Our bees flew strong in February, but now are much depopulated, and quite a number wintered out-of-doors are dead—just simply died out.

The severe winter was very hard on our peach-trees. We are obliged to replace many. We had a nice little orchard of about 1,600 trees, about ⅓ or more old enough to bear. We had some 400 bushels from them last year, of very fine, large freestones, lasting about three months.

MRS. L. C. AXTELL.

Warren Co., Ill., April 23.

Van Deusen Thin Foundation.

We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

THE A. I. ROOT CO.,

118 Michigan Street, - CHICAGO, ILL.

Convention Notices.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.
H. H. HYDE, Asst. Sec. and Treas.
Hutto, Texas.

Illinois.—The Northern Illinois Bee-Keepers' Association will hold two sessions of its spring meeting, one at Mr. John Wagner's, near Buena Vista, Stephenson Co., under the supervision of the Vice-President; and one at Mr. Oliver Taylor's, at Harlem, Winnebago Co., in charge of the President, on Tuesday, May 16, 1899. Every one is cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Headquarters FOR THE Albino Bee!

THE BEST IN THE WORLD.

If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the ALBINO. I can furnish the Italians, but orders stand, as heretofore, 50 to 1 in favor of the ALBINO. I manufacture and furnish SUPPLIES.

S. VALENTINE, Hagerstown, Md.

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Better than Ever

Am I prepared to furnish everything needed by the up-to-date bee-keeper, all goods manufactured by THE A. I. ROOT CO., shipt to me in car lots, and sold at their prices. Send for illustrated, 36-page Catalog FREE.

Address, GEO. E. HILTON,

17A17t FREMONT, Newaygo Co., MICH.

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BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

Italian Bees and Queens

...FOR SALE...

Queens, $1.00 each. Bees by the pound, $1.00. Nuclei, two-frame, with Queen, $2.00; one-frame, $1.50; each additional frame, 50 cents. These are sent in light shipping-boxes. L. pattern frames.

MRS. A. A. SIMPSON,

19D4t SWARTS, Greene Co., PA.

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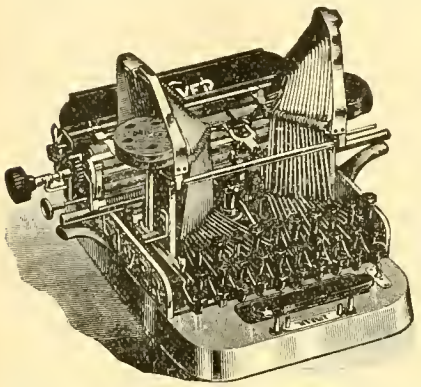
IT TOOK 25 YEARS to find out that typewriters have been built up-side-down. The OLIVER is built right-side up, where the WORK IS IN SIGHT.

THE OLIVER IS POPULAR because it is an up-to-date typewriter, not in the Trust, and because it SHOWS EVERY WORD AS YOU WRITE IT.



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TITLE & TRUST CO., Chicago.
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ILLINOIS CENTRAL R.R., Chicago

and countless other houses of like importance and character.

Send for Catalog.... Oliver Typewriter Company, N. E. Cor. Washington and Dearborn Sts. CHICAGO, ILL.

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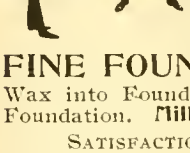

Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf AUGUST WEISS, Hortonville, Wis.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in **America.** We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, April 18.—Best grades of white, 13c; off in color, etc., 11@12c; light amber, 10@11c; dark amber and mixt buckwheat, 7@9c. Extracted, clover, 8c; other grades of white, 7@7½c; ambers and dark, 6@7c. Beeswax, 27c.

Sales are in a small way, as the time of year is with us which usually sees the close of active sales. Owing to the inclement weather which has cut off the early fruits and vegetables the honey market has benefited, so that all of the white comb is nearly disposed of. There is quite a quantity of dark and undesirable comb being offered. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.
M. H. HUNT.

NEW YORK, April 19.—Fancy white, 12c; No. 1 white, 10@11c; amber, 9c; buckwheat, 7@7½c. Extracted in good demand at unchanged prices. Beeswax quiet at 27c.

Our market is well cleaned up on comb honey. There is a fair demand, especially for white.
HILDRETH BROS. & SEGELKEN.

SAN FRANCISCO, April 26.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Light supplies of both comb and extracted operate against any special movement in honey. Prices remain quotably as before. New crop honey will be on market in about 30 days, but the yield is certain to prove light, and there will be very little white sage, which is the best grown.

BOSTON, April 18.—Fancy white, 13c; No. 1, 11@12c; A No. 1, 10@11c; light amber, 9c. Extracted, stocks about cleaned up. Nominal price for white, 8c; for light amber, 7c. Beeswax, very light stocks; selling at 27@28c.

Naturally the demand for honey is gradually growing less, and altho stocks on hand are not large, still the demand is so small that the general feeling is weak and prices are being shaded in order to work off stocks.
BLAKE, SCOTT & LEE.

KANSAS CITY, April 6.—Fancy white comb honey continues in good demand at 13½@14c; choice white at 12½@13c; dark, 10½@11½c. Extracted scarce at 6½c. PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & Co.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.
BATTERSON & Co.

OMAHA, April 18.—There is but little stock left in dealers' hands now, and realizing that no further receipts can be expected until another crop gets into the market, it is held firm at 14c for fancy white comb. Extracted, 7½c.
PEYCKE BROS.

Nuclei of Bees For Sale.

We have arranged with a bee-keeper in Lee Co., Ill., about 100 miles west of Chicago, Ill., to fill orders for 3-frame (Langstroth) Nuclei of Italian Bees, with Queens, in light shipping-boxes, at $2.75 each, or in lots of 5 Nuclei, with Queens, at $2.50 each. Address,

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

Please mention Bee Journal when writing Advertisers.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,
518 Ashland Block, CHICAGO.
Headquarters of the Eclectic System.
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☞ IF YOU WANT THE
BEE-BOOK
That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his
Bee-Keepers' Guide.
Liberal Discounts to the Trade.
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I ARISE

To say to the readers of the BEE JOURNAL that
DOOLITTLE...
has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing

22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co.....Watertown, Wis.	J. Nebel & Son .....High Hill, Mo.
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J. M. Jenkins.....Wetumpka, Ala.	J. W. Bittenbender.....Knoxville, Iowa.
Portland Seed Co.....Portland, Oregon.	J. L. Gray .....St. Cloud, Minn.
E. T. Abbott, ...St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co. .....Sheboygan, Wis.
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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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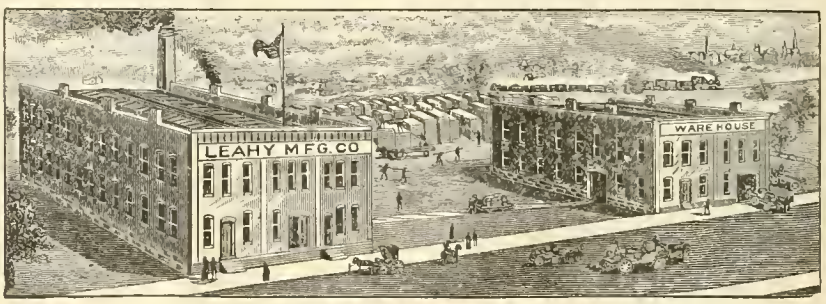

For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Eastern Bee-Keepers!

Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

ITALIAN BEES AND QUEENS.

These Apiaries are run for HONEY and pay well, as the bees are hustlers.

Untested Queens, 70 cents; 3 for $1.80; 6 for $2.70.
Tested Queens .....$1.00 each.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.
Illustrated Catalog, 72 pages, Free.

We also manufacture Tanks of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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Please mention the Bee Journal when writing Advertisers.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MAY 18, 1899. No. 20.

CONTRIBUTED ARTICLES

Agave Americana, or Century Plant.

BY W. A. PRYAL.

A HONEY-PRODUCING plant should yield a crop of honey every year after it has once reacht its period of blooming. Then it should not be one that the bee-keeper should have to wait a century before he sees it yield its crop of honey. I am afraid there are very few apiarists in this world that would care to plant for a crop for nectar that they would be likely to harvest when they were ready to be gathered themselves in that vast crop that death stores away each year with more or less pains. Of course, no one knows a bee-keeper who ever sowed the seed of a plant that he had to wait a century before his bees gathered honey from the blossoms of said plants.

Herewith is presented a very nice picture of a century plant. Who has not heard of this plant? Those who have not seen it, have come to believe that it is a wonderful part of the vegetable creation. It may be, but I have never lookt upon it with so much wonderment. Perhaps this is owing mainly to the fact that I have been familiar with it almost as long as I can remember. Still, there are a few features about this plant that takes it out of the ordinary run of plants we are wont to meet in our daily intercourse with plant-life. In warm climates it makes a rapid growth, that is, it seems rapid, for its leaves become quite long and succulent, and sometimes numerous. They are great, lubberly-looking leaves, and remind one for all the world of whale-bone just as it is brought from off the whaling ships, tho they are of a greenish-gray color, and their edges barbed with vicious hooks or thorns that are curved toward the trunk of the plant, thus being able to catch or wound anything that comes within their reach. Then, the end of the leaf has a sharp-pointed spike or thorn that is so hard that a keen-edged knife will cut it only with difficulty. I have heard that in some places butcher-birds impale their prey on these points, and often every leaf will have its end "ornamented" with a grasshopper, butterfly, or some other insect. * * * But I am to tell of the plant as a honey-producer. In doing this let it be understood that I am not going to advocate the planting of agaves by the apiarist as an addition to his bee-flora. Should he live in a climate as mild or warmer than that of California, he may set out a few for ornament or curiosity, or both. In time, and it won't be a century, as many have been led to suppose by the misnaming of the plant, it will bloom and he will see his bees swarm on the flowers as he never before saw bees crowd upon a flower to extract the nectar therefrom.

For years I had noticed bees working upon these flowers, but as the flowers were always so high from the ground, I did not have a chance until a year ago of observing the amount of nectar a single flower yielded. In from 8 to 12 years one of these plants will begin to show signs of getting ready to flower. After blooming the plant dies, tho it has made provision for continuing its species by numerous suckers. Its asparagus-like stem or scape will then push its way from out the sheathing of the last leaves the original plant will produce, and rapidly rear its tip skyward. Tho I have never measured a day's growth of one of these trunks, I verily do believe that it is no uncommon thing for them to grow over a foot in 24 hours. In a few weeks the plant will present the appearance of the one in the engraving shown here, and possibly be 25 or 30 feet tall.

It was while one of these trunks was making giant strides upward on our place, that its weight was carried out of the perpendicular, and its roots were unable to hold it upright, so it came toppling to the earth. Yet, while the main portion of the trunk remained in a recumbent position, the portion that was to bear the flowers raised itself erect. Thus I was enabled to study the flowers at close range. It was delightful to see bees pile over each other to get at the nectar. And such quantities of the fluid! I never saw anything like it before, nor do I expect to again, unless I look into more flowers of the century plant.

The flowers are anything but pretty; they are of a nasty yellow color; a half-inch or more across and about one-and-a-half inches deep, sometimes more. They always maintain a vertical position, so that the nectar does not run out of the flower-chalice. I was able to make a photograph of a cluster of the flowers. With a glass syringe, such as is used to charge a fountain-pen, I have taken sufficient nectar from three or four flowers to fill a dram-phile: this at one time.

The nectar was as clear as water. I set a small bottle of it in my room. In a few days thereafter, on examining it, I

found that fermentation had set in and the cork was forced out. Talk about rank odors! I suppose there are worse smells in this world, but I have fortunately not come across them, nor I don't want to, either. I hardly think the honey the bees would be able to store from these flowers would be like the odor I have mentioned, as the bees would put the nectar through a process that might rob it of its objectionable features. Above I said I did not see anything wonderful about this plant. I must make an exception; it is the odor of its nectar. This peculiar smell is noticeable, to some extent, in the flowers.

The Agave, or Century Plant, as it is commonly and improperly called, is a native of Mexico and South American countries. By some it is referred to as the American Aloe. This is incorrect. There are several varieties of the plant, one of which, I believe, is a native of California. In South America the natives make a kind of cordage from the leaves. In Mexico juice obtained from the leaves is fermented and made into a drink which is said to be agreeable, tho intoxicating. I should think if this drink was as odoriferous as I have found the fermented nectar to be, a man would have to have a strong stomach to tackle it—one for instance that could delight in storing away limburger cheese.

Alameda Co., Calif.

Dr. Miller Pitcht Into About Pure Italians, Five-Banders and Albino Bees.

BY G. M. DOOLITTLE.

FOR several years Gleanings kept an arena for Dr. Miller and Doolittle to fight in, and it seemed to do Editor Ernest Root lots of good to see Miller and Doolittle "lock horns" therein. But our Editor York is such a peacemaker that he would not allow of any fighting anywhere about him, so it will be of no use to call on him to open up an arena for any one. Nevertheless, I am going to pitch into the good Doctor "just a wee little bit" to see what the result will be. As Dr. Gallup used to say in these columns, that he, when a boy, would hit the "old tom-cat between the eyes just to see what effect it would have." And so he would hit Flanagan, Quinby and others, and the effect was something which brought lots of practical things out in the *good old* American Bee Journal. With this introduction finisht, I now call on Dr. Miller to stand up and defend himself.

You say on page 198, in reply to "Johnny Bull," "The original pure Italians that came from Italy were three-banded, that is, the first three bands of the abdomen next the thorax were yellow." Now, Doctor, did you ever see any *pure* Italians that came from Italy? If so, in what sense do you use the word "pure"? If you use it in the sense of "free from mixture," as the Standard Dictionary speaks of purity, how did it come about that bees were bred from this original *pure* stock having "all the bands yellow," as you speak of in describing the golden Italians?

Then, Doctor, did you ever see an Italian *bee* which came from Italy, except a queen? If so, were the first three bands (?) next the thorax *yellow?* And did you ever see even *one* bee from an *imported* queen that had three *yellow* bands?

But what do you mean by bands? You saw that question-mark back there, did you not? That doesn't mean "sic," exactly; but I had supposed the yellow was on the horny *segments* of the abdomen. In other words, I had supposed that the abdomen of each bee was composed of six *horny segments*, instead of six "bands of the abdomen," as you put it, or would have, had you spoken of the six instead of the three.

Now, if "bands," as you used it, meant segments, did you ever see *one* single bee from an imported queen that had *three* yellow segments? If so, you have seen something that I never saw. In the first place, I never saw a single worker-bee from an imported queen that had any *yellow* on it at all. The color was always a maroon, chestnut or leather color, not yellow.

In the next place, I never saw a single bee from an imported queen that had three *segments* which were *all* of a maroon color. Did you? Was not each of the three segments next the thorax composed of both maroon color and black or dark brown, and did not these stripes of maroon color and black, running around the top part of the segment, constitute the bands? Then as these pure (?) maroon-banded bees were bred in this country, did not the color of maroon become changed to *orange* yellow, so that we had the American Italian bee with three yellow bands on the first three segments of the abdomen?

Don't sit down yet, Doctor, for I want to hit you some more. You further tell "Johnny Bull" that "breeders in this country by selection have secured workers with five yellow bands." Now, did you ever see a single worker-bee that had both yellow and black (thus making bands) on five of the segments of the abdomen? If you have, you have seen something which I never did. I have seen workers with both yellow and black on *four* segments, but when it came to pass that a yellow and black band was found on the *fifth* segment, some of the other segments lost the *black* entirely, so that a part of the segments (usually the first two, three or four next the thorax) were a solid yellow, this making the worker appear like "a lump of gold" when out sporting at the entrance for its "first play-spell" in the sunshine.

Next you tell "Johnny Bull" that "breeders in this country by selection have secured workers.....some having all the bands yellow, these last being called golden." Now, Doctor, look out, I'm going to hit you hard, right straight between the eyes. Did you ever see a single *worker*-bee having *all* the *bands* (*segments*) *yellow?* If so, I stand ready to give you *ten dollars* for the *mother* of that bee. There, I knew that $10 would hit you hard, for I see you are down. "Ten dollars lost!" did I hear you exclaim? Not so. You can never lose something you never had. See?

But I am not thru with you yet, even if you *are* down. You tell "Johnny Bull" that "albinos among bees are much the same as albinos among the human race—bees which have been so bred that the coloring-matter is somewhat lacking." Did you ever see an *albino* bee? If so, what part of it lackt in coloring-matter—the head, thorax or abdomen? Was the coloring of the horny segments of the abdomen so lacking that the yellow or maroon part of the bands were white? The Students' Standard Dictionary says albino means "a person, animal or plant unnaturally white; a person with milky-white skin and hair, and pink or red eyes." And as you "swear" by the Standard Dictionary, and tell us that "albinos among bees are much the same as albinos among the human race," of course we shall all be looking for a bee whose head, thorax and abdomen are milky-white, all but the eyes, which should be either pink or red. Now, Doctor, doubly look out, for I'll give you *twenty dollars* for the mother of such a worker-bee as that.

Remember, I am going to leave you now, lying there under that pile of thirty dollars till you reflect a little while, and tell us what you really meant by those answers to "Johnny Bull," but I have "another grist" for you from the same number of the American Bee Journal, and would "go for you" still further, but I always considered it mean to trample on a man after he was down.

(Aside to the reader.) I have purchast several albino queens, and all the difference I could see between their workers and those of the ordinary Italians was, that the majority of the workers had white or gray hairs on them instead of the yellow or dark-brown hairs of the Italians.

Onondaga Co., N. Y.

The Laying of Young Queens—Queen-Rearing.

BY HENRY ALLEY.

SOME time the past winter I read a quotation in this paper that was decidedly wrong, and I have been expecting to see it denied by some of the old correspondents. As no one has done so, I am moved to say something about it.

The quotation was taken from a foreign bee-publication, and the wrong statement was by a foreign bee-keeper who, it seems to me, must be a person of limited experience in queen-rearing, to say the least. The writer said something like this:

"Young queens never lay their eggs compactly as old queens do, but scatter them over the combs." Such a statement is as far from the truth as any statement can be. The best evidence that a young queen is of no value, or an old queen, as for that, is the fact that she does not lay her eggs compactly. If she "skips" even a few cells, she is not up to the standard I place upon all queens.

When a queen scatters her eggs, pinch her head—she has lost her usefulness. The queen that deposits an egg in every cell, and every egg alike, is the queen for me, and shows every indication of being well-bred, and of the first quality.

While I admire large queens, I must say that the best, most prolific and profitable queens I ever had were medium in size. On the other hand, the meanest queens I ever saw were very large, and were reared from cells taken from a colony that had cast a swarm. I do believe, and have always claimed, that the best queens we have are reared by artificial methods. I certainly have found this correct in my own experience.

Some one has said that any one can rear queens. That is correct. But every one who rears queens cannot produce all *good* queens. I know I cannot, and I have been trying it for 37 years. Nor do I believe every one who rears queens can become expert at the business, any more than all can become expert at any kind of business. There are but few people of the many in any kind of business who can become expert at it. I know that the person who rears queen-bees must use his brains a good deal if he produces a good queen by any method known to bee-keepers. Many have found this out, and have retired from the business.

There is no part of the bee-business that does not require tact, brains and long experience in order to become an expert and to be successful. A bee-keeper may be located in a land of honey, but he never can get that honey stored by bees unless he knows how to do it. One must use his wits and his muscle, and then a mark can be made in this world. I suppose we are on this earth for some good purpose, and the only way to do to advertise our existence is to put a little kick and push into business, then if there is not much money in it there may be a little fame, and that may help out some day. Essex Co., Mass.

The Honey Season in California—Other Items.

BY PROF. A. J. COOK.

AS is well known, California has two markt peculiarities as a honey-producing State. First, the immense crops of honey in certain years; and, second, the numerous years when no honey is produced at all, or at least little more than enough to keep the bees. Since I came to the State, in 1894, each alternate year has been visited with a drouth, and no honey was produced at all. The other years have not only produced honey, but the crops have been enormous. The fact that drouth is surely followed with a dearth of nectar-secretion is so well understood that if we get very much below the average rainfall the bee-keepers themselves are entirely despondent, and count on no crop at all.

The present season bids fair to bring two seasons of no honey-production in succession. It has generally been thought here in this region that 15 inches of rain—which is about our average—was necessary for a crop of honey. Anything below that would result in a diminisht crop, and, if very much below, no crop at all. Last year the flow of rain was just about one-half the average, and except for a short time in early spring, very little honey was stored. The rainfall the present season—unless we get little more—is hardly up to that of last. Yet I think we cannot judge correctly of the present year from our experience of a year ago. The present season all the rains that have come have been when most needed, and have come in such gentle mood that every drop has been utilized. It is certain that the grain crop this year about here will be much better than that of last year. It is possible that nectar-secretion will also be different.

The first year I came to California—1894—we had a small rainfall, which was well distributed thru the season. I taught the botany that year, and was a close student of the flora. There was a well-markt and continuous succession of flowers from the early spring-beauty, as I should call it—Gilia dianthorides—to the host of composite flowers which appeared from July on. From my study since I judge the succession that year was well-nigh typical. The three following years, one of drouth and two of good rain supply, showed a succession of flowers much the same as that of 1894.

Last year, 1898, the early spring was exceedingly dry. The flowers came very early and in scant numbers. I despaired having enough for class use; but in early April, as my work commenced, a copious rain came with it, and I found that the early flowers came again, and so with a little more trouble to visit the canyons we had no difficulty in finding all the flowers we needed for our class use; indeed, the range in number quite equaled that of any previous year.

This year we have a season much different from any of the previous ones. The flowers seem to be buncht, the early ones coming late, and the late ones coming forth early. The beautiful Gilia, already mentioned, and the shooting-stars, are fully a month later than in any of the previous years, while the black sage is in full bloom for weeks before its usual time. These show that this season is quite different from any that we have had before. Is it possible, then, to correctly judge of what the season may bring forth in the way of growth, vigor, and may we not add, nectar-secretion?

While I fear that the bee-keepers will be disappointed again this year in not securing a crop in this region, I am not at all sure that such will be the case. I find the bees now busy on the black sage and the just-opening white sage, as well as on many other flowers, and so far as I can judge they seem to be getting not a little honey. A week ago I met on the streets of Los Angeles our friend Mr. J. H. Martin, and found him quite hopeful of the honey crop the present season. I think that most bee-keepers would not sympathize with him in this feeling.

Several of the largest apiarists of Ventura County have moved their bees to the region of the alfalfa fields in the San Joaquin valley. They expect, and not without reason, not only to get enough honey to sustain the bees, but also hope for some surplus besides. It seems more than likely that this is a very wise course, and yet, if we should have a partial crop here it might pay better to keep the bees at home, as the expense of moving is by no means a trifle.

NATURE AND SOURCE OF HONEY-DEW.

I have been very much interested to read the various comments upon my article in a late number of the American Bee Journal regarding the nature and source of honey-dew. There seems to be not a little testimony that honey-dew may come at times as a secretion from the plant. Yet there seems to be almost as much that it rains down a product from the heavens. This latter seems so improbable that I think almost any student of nature would hesitate to give it credence, except as he had most crucial and repeated proof.

I should be very glad to receive samples illustrating honey-secretion from plants. One writer in the last Bee Journal is very certain that bees do not gather honey-dew secreted by insects. There is no doubt at all in this matter. I have known bees to gather large quantities of honey both from plant-lice and scale insects. The former was of excellent quality, and would rank first-class both as to color and flavor in any market.

Honey-dew from the large plant-louse in Michigan, and from the coxcomb-elm plant-louse, both furnish material for excellent honey. I have repeatedly found the nectar so abundant in the last case that I have been able to take it first hand directly from the insect, without waiting for the bees, and with others pronounced it of most excellent quality. On the other hand, the honey secured from the honey-dew secreted by scale insects is very dark in color, rank in flavor, and even possesses an odor that makes it quite unfit for table use. As many will remember, barrels of this kind of honey were secured in Michigan for more than one season during the very dry years of the 80's. I myself produced one year more than a barrel of such honey. I took samples to a confectioner, who made a very fine quality of honey-cookies, and he took it at a fair price, finding that it was as good for this purpose as any other honey.

If Mr. Cowan should tell me that he had personally seen honey-dew that he knew was secreted by plants, I should certainly feel convinced that I was wrong. But if he takes his evidence second-hand, I should hesitate before accepting it—I should at least wish to know that his informants were as accurate and scientific as I know him to be.

HERMAPHRODITE BEES.

I have just received one of those interesting bees, of which I have received several in years past. This bee has the head of a drone and the thorax and abdomen of a worker-bee. The eyes meet above, while the posterior legs show well-markt honey-baskets. The sting shows plainly at the tip of the body. Such cases are not very rare, and while the bees appear to be hermaphrodites, they are not really so. Dissection proves that the abdomen really determines the sex of the bee. In this case the bee is really a worker, but has a drone head. The antennæ and jaws are more like those of the drone than of the ordinary worker.

CYCLOPEAN BEES.

I have another bee that is still more remarkable than are even the so-called hermaphrodites just referred to above. This bee has only one eye, which is a huge crescent, the

center of which is at the apex of the head, with its convexity uppermost, otherwise this bee is not at all peculiar. The hive from which this bee came produced several of the same kind. While this peculiarity is much more rare than the one referred to above, I have found several cases on record. It is probably a variation produced by something abnormal in the environment of the bees of this hive.

Los Angeles Co., Calif., May 2.

The Anger of Bees—Their Bravery.

BY C. P. DADANT.

THAT courage is not measured by size, is plainly proven by the bee. We have no cause to be astonisht that lions, tigers, bears, or other large animals have the courage to defend their life or to attack others; the idea of valor calls before our mind's eyes the ponderous knights in steel armor, and the feats of Hercules and Samson; but that a small insect that is hardly half an inch long, and weighs but a few grains, should not only fight other insects larger than itself, but should even attack any being by whom it or its home may be threatened, whether the aggressor be bear, lion or man, and that it should usually win in the fight, is indeed wonderful. Without taking into account the number of its enemies, without considering its own feeble strength, it defends to the last its home and its stores, even at the sacrifice of its own life, since the loss of its sting is usually the cause of its death.

It is true the bees are united; Virgil says, "Mens omnibus una est"—the spirit of all is one; all would rather die than not conquer, when the fight is once begun. Among these Amazons there is no such thing as moderation or restraint when the battle is on, and their ardor degenerates into fury. Not only must they win or die, but they persist in following their aggressor far from the battle-field. King David finds no better way to describe the obstinacy of his enemies than to say, "They compast me about like bees."

Brave men who have faced dangers of all sorts, as soldiers in battle, as firemen in dangerous conflagrations, have no courage before a colony of angry bees; and Della Rocca, in his treatise on bees (1790), gives two instances where bees were employed to defeat an army.

When a bee's suspicion is aroused, and she takes wing to ascertain whether the enemy is about her home, her flight assumes a special sound. Her buzzing is sharp, quick, and very different from the noise made by a peaceable worker returning from the field. This sound serves as a call, a special warning to the sisters at home. It certainly attracts the others, and informs them as plainly as a speech, that some danger is feared. You may move away ever so cautiously, if a single bee has followed you, there are ten chances to one that her angry buzzing will attract others from the same hive, unless you can manage to put a safe distance between you and the place of strife.

Slight jars, quick motions in front of the hives, and all unusual actions about the apiary are liable to anger bees. I have known the bees of a dozen hives to rush out ready to fight, from the passage of a heavy traction steam-engine close to the apiary, which jarred the ground in its passage. Yet the bees in close proximity to railroad tracks become used to the passage of trains.

They are more intractable at times during atmospheric disturbances, and their ill-nature is often a sign of an approaching storm. They have great dislike of clothes made from the covering of animals, while clothing made of vegetable fiber is less objectionable to them. For the same reason a brush made of asparagus tops, or of hemp, jute, or a whisk-broom, is better to brush them off the combs than either a hair brush or a feather broom, which they will sting with persistency. There is nothing extraordinary about this. They are accustomed to seek their living among plants, and to be in constant contact with all forms of vegetable life among the grasses, in the calyx of flowers, and about the leaves of the trees, while, on the other hand, all animal life is by them naturally regarded as a danger.

They naturally and instinctively hate the woolly fur of the bear, and all that has a resemblance to it. Thus, woolen clothes are obviously dangerous to wear, and the more woolly they are the worse is the effect. They dislike black, either because black is not a natural color among field-plants, or because it also resembles animals. They will sting a felt hat unmercifully. But Debeauvoys, in his book, says that a white felt hat is as readilly attackt as a black one. They seeem to know the weak spots in their enemies, for they aim at the eyes, the ears, the nose, and the mouth, besides burying themselves in the hair with frenzy.

Nothing angers them more than fighting them, and for that reason persons who are much afraid of bees are in greater danger of being stung than those who have no fear, for they gesticulate and strike at them the moment they hear their buzz, and a bee that might pass harmlessly is apt to mistrust that something is wrong in the intentions of the person who so unwisely attracts her attention.

Hancock Co., Ill.

Some Interesting Notes and Comments.

BY EDWIN BEVINS.

SPELLING REFORM.—Now and then somebody kicks about the American Bee Journal's spelling reform. What's the use? If any of us are too old to learn new tricks, the editor says we don't have to. Just look here! Almost every one sees, or is liable to see, packages labeled, "Buckeye Rolled Oats." What a waste of time and ink is here, O my countrymen! Why is not this label printed, "Buki Rold Ots"?

BEE-SUPPLY COMBINATION.—There is a little matter of interest to honey-producers that needs a little airing. It is charged, or at least broadly insinuated, by very respectable authority, that northern supply manufacturers have combined to keep up the prices of supplies. I know nothing of the truth or falsity of this charge, but it does look as if there may be something wrong when the price of so inexpensive a thing to make as B. Taylor's comb-leveler is held at one dollar.

HOFFMAN FRAMES.—I am with Mr. Davenport in my liking for Hoffman frames for all hives not deeper than the standard. True, they get stuck up with propolis sometimes, but even then I can handle them in less time than I can handle the loose, hanging frames. As Mr. Davenport has given a means of overcoming the inequalities of spacing the Hoffman frames at the bottom, I shall like them better than ever. I have never had much trouble on account of these inequalities, but have sometimes thought that the manufacturers might have done a little better job. I never liked any spacer for the bottoms of the frames that reaches across the hives and comes in contact with the bottom-boards. Nor do I like nails or staples driven into the edges of the end-bars. Some sort of spacer, however, is necessary in hives deeper than the standard, and I have tried hard to think of one less objectionable than any I have yet tried. I will throw out a few suggestions, and ask the Roots, or some other manufacturer, to work them out to a practical result. It seems to me that a metal spacer might be made to reach across, and be permanently attacht, to the ends of the hives just above their inside bottom edges, with projections pointing inward and reaching far enough to embrace the end-bars of the frames. Of course, end-bars would have to be of uniform width, and perhaps a little narrower than many in common use.

I have a sneaking fear that the kind of spacer I have here suggested will be regarded as impracticable, but I will continue to hope that something may come of it. It seems as if an attachment with curved upper edges to guide the frames into the spaces intended for them, and so slight as not to admit of the accumulation of much propolis, may have to be a feature of the spacer.

END-SPACED FRAMES.—I took occasion once to write something in derogation of frames that have to be spaced at the ends. I wish now to modify what I said then, and to say that I have no disposition to hurt their inventor. You see, it was this way: That season I thought I would use the thick-top hanging frames, and somebody sent me a lot with the shortened top-bars. Of course, I had to use staples or send the frames back, and I resolved to try them. When these frames were put in a hive they would not stay anywhere in particular if the hive was jarred the least bit, but rattled around in a most exasperating way. The Hoffmanized bob-tailed frame is a very good frame to use.

TAKING AN INVENTORY—WINTERING.—It is now April, and bees are flying a little for the first time in many days. The atmosphere is chilly, the frost is not yet out of the ground, the late snows are melting, and the country is one vast sea of mud. In view of the disagreeable weather conditions at this stage of spring, it may be a good thing for

bee-keepers to size up the conditions affecting their interests in the immediate future.

But, first, let us glance at the conditions that have prevailed in the recent past. Winter weather came early in November, and has had but few interruptions up to the present time (April 11). The days when bees could have a flight have been few, and the spells of confinement have been long ones. I am speaking, of course, about bees wintered out-of-doors. Great losses are reported from almost every place, and it is quite likely that the colonies that have survived are weaker in numbers, and their stores nearer the point of exhaustion than is usually the case at this time of the year. Those persons who do not examine their colonies early in the spring will, no doubt, meet with many surprises if they examine them now. Like myself, they will, I presume, find some colonies dead with plenty of honey in what would seem to be easy reach; some colonies will be found consuming the last little patch of honey in the hive, and in some colonies will be found some little patches of brood with honey so remote that you will wonder how the bees live and yet keep the brood alive.

In view of the weakened condition of many colonies, and the deficiency of stores, it seems that more than usual care will have to be exercised in order to get a large force of workers in time for the harvest. For myself, I am studying the methods lately given by Mr. Doolittle and C. P. Dadant, in the American Bee Journal and other bee-papers, believing that if anybody can tell how it is done they can.

And now as to the way my own bees have wintered. One in nine of my colonies is about the extent of my loss. I have less bees than I had last fall, but, as a partial compensation, I know more. I had hardly a loss that was not avoidable, and yet these losses were all in hives of the 8-frame dovetailed size. My colonies in hives taking frames $11\frac{1}{4}$ and 11 inches deep have all come thru in safety, as have those in 10-frame dovetailed hives, and those in two sections of a sectional brood-chamber hive, each section of which is $7\frac{3}{8}$ inches deep. But I am not blaming the size of hive much for my losses.

A part of the colonies lost were too weak to winter without uniting or having the space in the brood-chamber contracted, and I did neither. Two colonies were smothered by dead bees at the entrance, and the others, with one exception, had consumed all of their stores. The bees in that one hive had eaten their way to the top-bars right up thru the centers of the combs, and starved, it seems, because it was too cold for them to move the cluster two inches either way. A cake of candy laid on the frames in time would have saved the colony, and several others might have been saved in the same way.

The conclusion of the whole matter seems to be that, while it is not impossible, or even difficult, to winter bees in the 8-frame dovetailed hives with complete success, yet they will winter with less work and less worry in the 10-frame hive, and hives that take a deeper frame. All this may have been settled to the satisfaction of many bee-keepers long ago, but I remember that there was a good deal of controversy over the matter in my early bee-keeping days, hence my experiments. Whether the advantages of 8-frame hives when the bees are storing honey, will compensate for their disadvantages in wintering, is a matter that each one must decide for himself. Would it not be well for those who think they must use hives of standard depth to make a compromise by using the 10-frame hives when the flow comes? I borrowed this idea from Doolittle.

I wish to modify what I have said about wintering, to the extent of saying that I lost one colony wintered in two stories of the 8-frame dovetailed hives. I wintered other colonies in two-story hives with perfect success. The honey in the one mentioned was all in the upper story, and there was an abundance of it, as much as four full frames of it, well distributed, was found after the bees had died. The colony was excessively strong thru the working season, and I can account for it only by supposing that the queen had exhausted her reproductive powers so early as to prevent the rearing of young bees for the winter. When I made my first examinations in March, the colony had dwindled to a small cluster—too small to maintain the necessary heat thru the cold weather that followed.

Decatur Co., Iowa.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

CONVENTION PROCEEDINGS

Report of Wisconsin Bee-Keepers' Convention.

[Continued from page 291.]

Cellar-Wintering of Bees.

In a cave or cellar prepared for the purpose in which I have quite successfully wintered for several years, the temperature is controlled by the use of air-tubes thru which fresh air can be admitted without disturbing the bees. My cellars are constructed mostly under the surface of the ground, with not less than three feet of earth over, and on all sides, except the doorways, which have three tight-fitting doors. The fresh-air tubes are 10 inches square on the inside; they go in under the doorways, and have one or two elbows to prevent the light getting to the bees.

I have another and a smaller air-tube for each cellar, which is six inches square, and goes down thru the center of the roof. From this tube the thermometer is suspended by a string. Each air-tube is supplied with a slide cut-off to wholly or partly cut off the circulation of air. I keep the temperature as close to 45 degrees as possible. A high temperature will, I think, prevent dampness.

Bees should be prepared for winter in September, and put into the cellar the first cold weather in November, usually from the 5th to 20th.

I place my bees in the cellar on a long frame made of 2x6, and one foot above the cellar-bottom. Each hive is raised above the bottom-board by sticks one inch thick placed under each end of the hive. I usually place the hives in tiers one above another five high. I leave all covers sealed down to prevent rats and mice cutting combs. I distribute rat-poison around in the cellar. I do not usually go into the cellar more than once during the winter. If the bees are put into such cellars in good condition the winter loss should not exceed 2 or 3 percent.

They should be removed from the cellar during soft maple bloom. I think it advisable to take them out in the evening after dark, and place them on stands regardless of where they stood the previous season. Their movements the next morning will be very gradual for the first hour or two, marking location, etc. No loss of queens will be caused by bees mixing. A. G. WILSON.

Vernon County.

Benefits of Attending Bee-Conventions.

Preparatory to the opening of my paper I wish to say that the smiling faces and the friendly greetings of members of this convention are worthy of note. How is it with you, my brother bee-keeper? Does it not inspire you with fresh courage? Is there not something in the pleasant visage of each that not only says "Welcome," but "we have a feast of the knowledge gained in the past 12 months for you and for all?"

Again, have we not been housed up and perplext with other cares and duties, and allowed ourselves to become stale in the bee-industry? Can you think of any place where you can become more thoroly aroused, filled with more enthusiasm, than at the annual convention? How otherwise can we expect to get the different modes practiced by our best bee-keepers? So rapid is the progress that we cannot afford to live in the backwoods in this nineteenth century. At our conventions we are encouraged with papers and discussions to add to the knowledge imparted by the research and inventive skill and methods of our most prominent bee-keepers. Each succeeding year brings before us scientific apiculture comparatively of to-day's creation. Practice has been shown the best fitted to obtain the best results.

Then, I consider it a duty that we impart all knowledge gained from year to year, to our friendly bee-keepers. We learn at our annual meetings that bee-culture is being recognized as an important factor in the commerce of the country, and if properly fostered and encouraged it will soon grow to large proportions. Every industry in the country is represented annually or semi-annually—dairying, agriculture, florticulture, horticulture, manufacturing,

etc. If such conventions be beneficial, it is a fact that to succeed in apiculture we must convene regularly.

I will speak of a chapter by G. M. Doolittle in his book on "Scientific Queen-Rearing." He did not wish credit for that which was valuable in his book; he stated that he had pickt up a little here and there, and the credit belonged to some one besides Doolittle. Some of the suggestions received came thru the bee-periodicals, but quite largely from the reports given and thoughts dropt at many bee-conventions.

The events of each year truly mark an epoch in the progress of our association; it has emerged from its crysalis state to enjoy its higher and better fully-fledged legal existence. Thru the generous assistance given by the members of this association we have succeeded in presenting a Bill to the legislative body of our State, and by that body was recognized. The Bill was in regard to the extermination of foul brood. We now have as a recompense for our labors Mr. N. E. France as our inspector for the eradication of the worst enemy we have from our midst, and whose labors we greatly appreciate. It is not only a privilege but a duty to call attention to any evil of this kind.

I wish it were possible to induce more bee-keepers to become members of our association, with the hope of establishing a fixt price for our product, the quality governing the price. Our home markets are many times ruined by those who have only a small quantity, and perhaps inferior quality at a nominal figure.

So much knowledge is being grasped from our coming together each year and imparting to each other practical ideas and uses, that it would be like reaching out into a sea of knowledge to mention all points given worthy of note. I can only hastily mention a few. The different ways of successful wintering; the methods of strengthening weak colonies; preparation for the collection of supplies; necessary ventilation; the condition of the temperature as governing the amount of moisture held by the atmosphere; the kind of hives most practical; the most successful way of handling bees; the best honey markets; the best way to market honey and make it the most inviting; a uniform style of comb and package.

As I have already remarkt, there are many points which would be impossible for me to mention. When we try to help others we always help ourselves. We are getting at facts which would evidently help not only the producer, but dealer and consumer; as we undertake to educate others we become educated ourselves.

Since attending our annual meetings I have acquainted myself with many useful articles which lessen labor and prove a great help in apiculture. Thru the knowledge gained I have purchast articles which tho inexpensive yet they have proved valuable to me. I find I can get my wax made into foundation by those that make it a specialty, so reasonable that it does not pay me to bother with it, my machine being one of the first ones out. I have been able to purchase a machine for putting sections together and fastening the foundation at the same time, for which I am also grateful. These useful articles are labor-saving, and curtail expenses, as you do not require the hired help.

We also come in contact with "bee-ology" in all its various branches. The elements of success, however, at times baffle the best of us, and yet seem apparently easy of solution when as a body we exchange thoughts and give our various experiments. Practical apiculture rests upon more than the mere knowledge of what can be, and should be, done. It rests upon the unwritten part of our trade. How to obtain this knowledge is a matter for your careful consideration. Undoubtedly, if you were so situated as to attend every convention in your reach, and receive the advice and precepts of our most skillful apiarists, I know of no more reliable information. I can with pride say to you that the works of our own countrymen are pre-eminently the most practical and scientific. I have found them able to explain the anatomy and physiology of the bee, and its bearing upon practical agriculture. With all your knowledge, never allow yourself to be absent from our annual meetings, neither neglect the little things that impress you at the time as new, and you will soon become able to lay the foundation for success broad and strong, and when the superstructure is built it will long endure.

Green County. JACOB HUFFMAN.

The Hive I Prefer, and Why I Prefer It.

In the first place it might be well to say that I run for extracted honey, and my crop is gathered from raspberry, white clover, bergamot, buckwheat, etc., thus making a light, continuous flow for a long period.

The hives are 13-frame Langstroth in size, and I run them three stories high, from the time it is warm enough in the spring until the harvest is about or quite over. The advantages are these:

1st. Less feeding and less swarming.

2nd. I get more honey from the best colonies.

3rd. They winter better than colonies in 10-frame hives in the same cellar.

To sum up, it means more honey and less labor with a large hive than with a small one. Of course I speak for my own locality. E. M. HAYES.

Columbia County.

Apiarian Exhibits at Fairs—Their Advantages.

The first question to settle is, Shall I exhibit at the State fair or other fairs? If you decide to make an exhibit you should begin early, that is, as soon as the honey season is on.

In the first place, you must determine just what you intend to place on exhibition. If you decide on bees, honey and beeswax, the first to be attended to are the different races of bees, and be sure to see that yours are the standard in every way. The Italian bee as a standard has but three bands of yellow, no more and no less. The golden are bred only for beauty, and some points in working and swarming, but mostly for the former.

The next thing to prepare is the honey. You must have perfectly-filled cases of the different grades of honey, namely white clover, basswood, buckwheat, golden-rod, other fall flowers, etc. The sections should be of different sizes, as 4¼x4¼x2, 4¼x4¼x1⅞, and also include no-bee-space sections, so as to show the public in general the different styles of packages. Only the one-tier cases should be used. All sections must be free from propolis, and no leaky sections allowed.

With regard to the extracted honey, you should have samples of the different grades, as above mentioned for comb honey. This must be put up neatly in fancy glass jars, and most marketable packages, from the barrel down to the Muth one-pound jars, and be sure to show the styles of cans and tin pails used. Take both honey that is granulated and that which has not yet started to granulate, so as to show those that are ignorant of the granulation of honey how it comes about, and be always on hand to explain, for you will profit by so doing.

The night before you start for the fair have your one-frame observatory nucleus hives all ready to receive the bees you intend to take. Do not overcrowd them, for a few are just as good, and will stand the journey much better. I sometimes lose my best bees in making an exhibit, so you must not think it is all gain if you are lucky enough to get a few premiums.

The bees can be shipt, but I prefer to carry my bees with me in the coach, and then I know that they are safe. Last fall they tried to prevent my taking them into the coach with me, but I took them in spite of protest. Of course your other goods must go by freight a few days ahead of you. And here I wish to say that the only right way to ship a lot of honey is by freight, as it is by far the safest and cheapest way, and you do not need to protect the glass unless you wish. By nailing two cases together you will have a nice package that is easy to handle.

Upon arriving at the fair grounds prepare to arrange your exhibit with as much taste as possible, for your sales will depend largely upon the way this is done.

Now as to the advantages of honey exhibits. My aim has been, not only to take as many premiums as I could, but to sell as much honey as possible in small packages with nice labels attacht, showing my guarantee and full address. In this way you will be surprised when you return the next year to see your customers and their friends about you to see if that "honey-man is there again." In this way your sales will increase, and if your honey is No. 1 in every respect, you can sell it by the hundred weight right on the grounds, and take orders for more.

I have never had any trouble in disposing of my beeswax for 30 and 35 cents a pound. I have sold to certain people regularly for years, and do not intend to let any one excel me in beeswax.

I have often given away extracted honey as samples, and find that it pays. I now sell large quantities of extracted honey to private families in Milwaukee, when four years ago I could hardly get them to take a pound. One gentleman bought 150 pounds of basswood comb honey of me in 1897 for his own use, and he said that he had just used the last of it in August, 1898, and that it was as good as when he bought it. E. D. OCHSNER.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Using Combs of Granulated Honey.

Do you mean, when you say put the brood-frame with granulated honey that one finds in the winter-killed colonies under strong colonies, that you take the hive of the strong colony off its bottom-board, put the hive with the granulated honey on it, and then set the one with the bees right on the frames without cover or bottom-board between them? I had 150 colonies die last summer with lots of honey in their hives; I think it must have been honey-dew. This is the first year I ever lost more than two or three colonies. CARY.

ANSWER.—Yes, you have it exactly straight. The idea is to have the combs where the bees will readily get at them to take care of them. You may have no entrance directly to the upper story, forcing the bees to go thru the lower story to get to the upper one, or you may allow an entrance between the two stories. In some cases I have given a colony two, and even three, hives full of combs to take care of. If no honey is coming in you must be on the lookout for robbers when combs are first given, if there is honey in them.

Perhaps Two Queens in One Hive.

The first really warm day we had this spring, about the first of April, and the first day that the bees were out plentifully, a neighbor came to me and said a swarm of bees was on his fence about 200 yards away. As I started to go to see them I met them coming to my yard. They clustered at the root of a gooseberry bush. I examined them and found a queen, but for some reason she evidently could not fly. As the swarm was so small, and no bloom yet out, I put the queen on top the frames of the hive from which I thought she came, but soon I found her on the grass in a bunch of bees. I decapitated her. All my colonies at this time had laying queens in them and some brood. The queen must have been in the hive all winter with a fertile queen. Please explain this. ILLINOIS.

ANSWER.—If I understand you correctly, each colony had a laying queen without counting the queen found in the grass. It is barely possible that the swarm came from some other place, and that the queen could fly before you found her. It is more likely that a mother and daughter had wintered in the same colony. I had a case once in which two queens not related wintered in the same colony. It would be nothing so very strange for two queens to winter together, but it seems unusual for one of them to swarm out.

Wire-End Frame—Saving Queens When Uniting—Building Up Weak Colonies.

1. How is the B. Taylor wire-end frame constructed?

2. Is there any way to save the queens of weak colonies when united in the spring?

3. In building up weak colonies in the spring, do you wait until the best colonies are real strong before drawing on them, or do you equalize all colonies and try to keep them so till the flow comes?

4. Are your frames 1⅛ inches all around? MICH.

ANSWERS.—1. It would be somewhat difficult to describe so that you would understand without seeing, and my remembrance of it is hardly clear enough to describe it even if you would understand it.

One way is to put them in cages and place them on top of brood-frames of a colony. There is some danger, however, that the queen of the colony may be killed; at any rate I once put several of them over a colony and the free queen was killed. At other times the queen has not been hurt.

3. I would never draw from the strongest colonies to help the weakest ones. If I do anything in the way of equalizing, it will be to help those that need only a little help. For example, if I have a number of colonies that contain brood in seven or eight frames, and from that down to one or two frames, I'll take frames of brood with adhering bees from the strongest, enough to reduce them to five frames of brood, and I'll not give these to the weakest, but give a frame to each colony that has four frames of brood. If there are frames enough to afford it, I may give two frames of brood and bees to a colony that already has three frames. When these are all supplied, the two-framers may get three frames of brood each. The idea is to reduce the strong ones no lower than five frames of brood each, and to bring up to five brood any colony that is helpt. If two or three frames of brood and bees are given to a weak one, it is better to have them from different colonies—safer for the queen. Of course, one must look out not to take the queen when taking brood and bees.

4. Yes. I'm not entirely sure that's best, but it's the best I know with my present light.

Quinby Frame for Queen-Rearing—Hybrids vs. Italians.

1. Do you think it advisable to use the Quinby frame in queen-rearing? If not, why?

2. Which frame would *you* advise a beginner to adopt—the Quinby or the Langstroth?

3. Are hybrid bees as good as Italians? MASS.

ANSWERS.—1. Yes, use the same frames you are using in general, whatever they may be.

2. That's a hard question to answer, and what might be best for one might not be best for another. In late numbers of this Journal Mr. Dadant and others have shown up the advantages and disadvantages of the different kinds. The kind that has been in most general use and has been most successful in your own neighborhood, other things being equal, is the one to adopt. The smaller frames have the advantage of being in more general use, and are easier to move. If your hives are to stand in the same spot from one year to another, and you are working for extracted honey, you might consider the Quinby.

3. The hybrids are as good for work as the Italians, providing they are good hybrids, for they will work just as industriously, and a cross, making a change of blood, tends to vigor. In some respects the hybrids are inferior. They are crosser, and their progeny will be likely to work backward. While the first cross may do as much work as the pure Italians, the progeny of the Italians will stand many chances of being crosses, and I'd choose the pure stock every time.

A Queenless Colony.

I have a colony that is queenless, and being unable to get a queen so early in the season, on April 14 I put in two frames of sealed brood and eggs, the lower part of one of which containing drone-comb but no eggs. I cut away, to keep up the strength till I could get a queen. On the 16th I lookt in and found two queen-cells begun where I cut away the drone-comb, but could see nothing in them. To-day (23rd) I lookt again and found both cells sealed over—one had a queen in the imago form, the eyes just turning pink. But what I wish to ask you is this: There were about a dozen sealed cells amongst the worker-comb which projected far beyond the others, like drone-cells, the pupæ of which were as large as that of a drone. I unfortunately destroyed them, thinking they were queen-cells, since which I have begun to wonder if they could be drones changed by the workers from worker-eggs, which I see from my book some authorities say is possible. If not, what were they? I am in hopes I have overlookt one or more; if so I will see what they turn out. B. C.

ANSWER.—Very likely they were queen-cells, which are often found projecting very little above the general surface. It is also nothing very unusual to find an occasional case of drone-brood in worker-cells, for some cause the eggs not being fertilized. There is no necessity to resort to the supposition that the workers changed an egg that would produce a worker into one that would produce a drone; and if you care for my opinion in the matter I am free to say that I don't believe such a thing ever happened. I wish you had said in what book you found such a thing mentioned; I've seen it in papers, but I think never in a book.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Changes in Apiarian Fixtures Deprecated.—N. D. West, in the Canadian Bee Journal, objects to fences and plain sections. He objects to changes in general, because they cost, and by the time all make them we are no better off than we were before; but he rather lets the cat out of the bag in giving reasons against fences by saying that 28 years ago he tried them. So he has done the very thing he objects to in others. But he has good sense on his side when he says that the man who makes some costly change to get ahead of others is only making expense for the whole fraternity, and in the end no one is any better off. Your head is pretty level, Mr. West.

The New York Honey Market.—Mr. J. E. Crane, of Addison Co., Vt., spent some time in looking over the honey market of New York city last December, and tells about it in an article in Gleanings, from which we take these paragraphs:

Remembering the experience of the late Moses Quinby in shipping honey to that market, when, in 1860, 20,000 pounds broke down the market completely, and much of the honey was carried over the following year before it was sold, I inquired how much honey was now taken by the same market, and was informed that there was no trouble in disposing of about 6,000,000 pounds yearly, about five-sixths of which was extracted honey; that while, formerly, there was a demand for honey but a part of the year only, now there is a demand the whole year round. These facts were of much interest to me, as the prospective demand for honey is one of great interest to every honey-producer.

I might say incidentally right here that, previous to 1875, or about that time, there was, so far as I know, no New England city where honey was regularly sold at wholesale. A little was sent to Boston or other cities and sold to any one who who would buy, or left to be sold on commission by any one who was willing to handle it, or, perhaps I should say, who could be trusted to do so; but I have the impression that most retail dealers, previous to 1875, in New England, went to New York for their honey. To-day several New England cities have wholesale dealers, some of them doing an immense business. These facts show the immense increase in the demand for honey during the last 30 or 40 years.

Two or three years ago we investigated the receipts of honey in Chicago, and came to the conclusion that there must be, in a good honey-year, about twice as much honey handled in Chicago as in New York, or something like 1,200,000 pounds. This would give about six pounds to each person living in Chicago, while it is now estimated that the per capita consumption of sugar in this country is 64 pounds. We all need to urge the more general use of honey.

Honey a Cure for Smallpox.—Mr. Chas. Dadant has kindly sent us the following item which he clipt from a newspaper:

MEXICO CITY, MEX., Dec. 26.—Experiments made with smallpox patients in Oaxaca, show that by administering honey diluted in water to smallpox patients the pustules of the worst variety disappear, and the fever is immediately diminisht. The matter attracts much attention. The remedy was accidentally discovered by a young girl who was down with the disease, who secretly refreshed herself with honey and water, with astonishing curative results, and it was then tried on soldiers sick with the disease.

Mr. Dadant wrote us the following note when sending the foregoing paragraph:

FRIEND YORK:—Please advise all the bee-papers to publish it, for if honey proves to be a good medicine for smallpox, it will be a great succor to mankind, while its use will help the bee-keepers to dispose of their crops.

CHAS. DADANT.

We might say that in the Bee Journal for Jan. 21, 1897, we publisht the same item, word for word, excepting it was then dated "Dec. 28." Mr. F. Bussler, one of our Mexican subscribers, seeing the item in the Bee Journal, wrote us the following letter, which we publisht March 4, 1897:

MR. GEORGE W. YORK, Chicago, Ill.

Dear Sir:—I saw your statement about the honey-cure for smallpox, and I can tell you that it is really true. Here in Mexico that disease comes nearly every year, when the rainy season finishes. This year it has been pretty bad in some places. The authorities are trying hard to get rid of this malady, but the Indians are very little educated. In nearly all the papers the honey-cure was publisht, and for this reason I sold my honey as soon as I got it out.

Yours respectfully, F. BUSSLER.

The Relative Cost of Comb and Extracted Honey, along with the question as to which is more profitable to produce, seems to be one of the problems never to be fully settled, and it is perhaps well that it is so, for if all found it best to produce only extracted honey, the possibility is that the price might be reduced, and a market for comb honey left unsupplied. In Gleanings the editor argues in favor of getting the bees to start promptly in the sections by first giving them a super of shallow extracting-combs, then putting under a super of sections. Dr. Miller thinks a single bait-section might do about as well, and objects to having part of the honey put in extracting-combs that might make white section honey. Then the editor urges that with prices in proportion of 6 cents for extracted to 10 for comb, counting all expenses on both sides there may be more money in the extracted.

Awful Adulteration of Foods.—At the last session of Congress, at Washington, a committee was appointed and an appropriation made for the purpose of conducting an investigation of the foods consumed by the people. Senator Mason, from Illinois, we believe was the author of this initiatory effort, and for the past week or two his pure-food inquiry here in Chicago has been treated to a revelation along the line of adulteration that is simply awful to contemplate—and of course worse than awful when it comes to swallowing the poisons that the adulterators have put into some of the foods we eat.

Here is a list of astonishing facts that just one day's probing brought to light:

That a commodity for sale thruout the United States, and in popular use among dairymen and milkmen for the preservation of milk and cream, and by bakers for the preservation of cream puffs, chocolate eclaires and similar pastry, is a product of wood alcohol, which is absolutely poisonous; that this preparation is used by undertakers for the preservation of dead bodies, and by health authorities for the disinfection of buildings where virulent diseases have been treated.

That ground tarred rope has been used to adulterate ginger.

That absolutely pure flour is a rare commodity; that it is adulterated with ground stone and clay from Tennessee and Georgia.

That pure buckwheat flour is rarely to be purchast after it passes thru the hands of a jobber or a wholesaler; that one barrel of pure buckwheat flour is generally mixt with two barrels of inferior spring-wheat flour that can be purchast for less than one-third the price of the buckwheat.

That nearly all powdered sugar is composed in great part of cornstarch.

That nearly all black pepper is adulterated with what is known as "buckwheat shorts" (hulls).

That retail butter dealers in this city daily violate the oleomargarine law.

That flavors sold at sodawater fountains as the juice of strawberries, bananas and pineapples are chemical compositions.

That pure vanilla extract for flavoring purposes is almost unknown, and that the flavorings for such extracts as are sold in the market are in the main derived from cumarin; that lemon and other flavoring extracts are also adulterated to a very great extent.

Dr. H. W. Wiley, the Government chemist, has been here to give testimony before the committee, whose work is simply preliminary, as we understand it. We believe that when it completes its investigations there will have been compiled such a mass of evidence regarding adulteration of foods that Congress will be compelled to enact a strong anti-adulteration law in order to put a stop to killing people with poisonous mixtures, not to say anything of the fraudulent side of the subject, which is simply appalling. Why, it seems there are plenty of people who are perfectly willing to sell poisons as food if thereby they can only put a few more dollars into their pockets. Highway robbery isn't "in it" when compared with some adulterators of foods.

Mr. G. M. Doolittle, in the May American Bee-Keeper, gives these words about new things in bee-keeping:

"There is much of value and merit in nearly all the new things put forth, when properly developt, but I cannot think that the using of these things as the 'cat's-paws to pull the chestnuts out of the fire,' as some do, before they have settled down and become an establisht fact, and the booming of them in the reading columns of a purchast public publication is very greatly in advance of what used to be termed 'highway robbery.' Catalogs, circulars, price-lists and advertising columns are the places for booming, if such must be done, and not in the columns which are purchast by subscribers for their instruction and advancement."

But it was a rather strange coincidence that in the very same issue in which was the above paragraph, also appeared, in the reading columns, about two pages devoted to booming what is called "a new hive," giving illustrations, etc. Mr. Doolittle should labor with Editor Hill before he "goes for" some other people.

* * * * *

Mr. R. B. Leahy and his company, of Missouri, have recently been given a write-up in their local newspaper, which had this to say in regard to them:

"In 1883 R. B. Leahy, then a struggling day laborer, made his appearance in this city, and for a time found employment doing odd jobs for several of our oldest citizens. Soon after his arrival here he opened a little wood-shop and began his life's work, that of building bee-hives and kindred supplies. His largest and most expensive piece of machinery at that time was a foot-power saw. With this he workt early and late, and by severe perseverance he added to his plant, little by little, until he was so fixt that his work and output attracted some little attention.

R. B. Leahy.

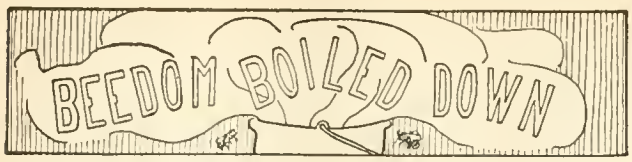
"In 1890 he started the erection of his present plant, and, being short of finances, succeeded in interesting John J., Jas. E., F. M., and E. B. Gladish sufficently to form a stock company, of which he retained a half interest. This stock company was organized under the name of The Leahy Manufacturing Company, with a paid-up capital of $8,000. R. B. Leahy was appointed geueral manager and treasurer, and Ed. B. Gladish, general foreman of the shops. The business has been continuously under the same management since, and the present business is a sufficient proof that it has prospered.

"Late last fall it became necessary to again enlarge the plant, and a new brick addition was built, which, with the new and improved machinery added at that time, doubled the capacity of the plant. They now occupy a two-story brick building, 54x130 feet, thoroly equipt up-stairs and down with the best improved machinery. In addition to the main building they have several warehouses, their wax-room and tin-shops being under separate cover.

"In the busiest season, which is now on, the plant is run day and night, and from 35 to 40 men and boys are employed during this period. That this factory is a great boom to labor has been duly demonstrated, over $10,000 being paid out here last year for labor alone. Sixty-five carloads of material was consumed in the manufacture of goods sold last year, which amounted to over $30,000."

* * * * *

"Two Sweethearts of Mine" is the name of a song received by us from the publishers a few days ago, the melody and words of which are very pretty. The song complete, words and music, will be sent to any address for 20 cents in silver or stamps, by the Groene Music Publishing Co., 32 East Fifth St., Cincinnati, Ohio. Send for it, mentioning that you saw the notice of it in the American Bee Journal.



To Prevent Cakes of Wax from Cracking, William McEvoy winds papers around boards and covers the pans so tightly that no air can get in, and has not had a cake crack for 20 years. The secret probably is that this prevents rapid cooling of the surface.—Bee-Keepers' Review.

Divisible Shallow-Framed Hives have not proved a success with G. M. Doolittle. In the Progressive Bee-Keeper he reports that he gave a *faithful* trial of the Heddon divisible system with from 15 to 20 colonies in such hives for four or five years, and averaged less than two-thirds as much as from the other colonies in the same apiary.

Times when Bees Don't Rear Best Queens sometimes occur, according to the veteran queen-breeder, Henry Alley, in Gleanings. Just after the honey harvest in July he thinks is the worst time to rear queens. The bees seem to want a rest then. From the last of July to about the first of September he thinks a good time to rear the very best queens.

The Value of Pollen, according to M. Bellot, in Revue Internationale, is much greater than it is generally supposed to be. Three colonies began brood-rearing in December, and he gave them every 10 or 12 days pollen that had been stored in other hives. Three combs were kept filled with brood, the population was doubled by March 20, and he estimates that each colony used three to four pounds of pollen.

Boiling Foul-Broody Honey seems to be a troublesome matter to settle fully. Prof. Hodge, in Gleanings, advised separate boilings, on different days, so that the spores might have a chance to vegetate between times and then the bacilli be killed. Now comes Harry S. Howe, in the same paper, and says this will not apply to foul-broody honey, for spores will not develop in honey, and bacilli will live in honey only in the spore stage. So the boiling must be long enough to kill the spores. Mr. Howe inclines to the view that 15 minutes is sufficient to boil foul-broody honey, the boiling-point of honey being from 225 to 235 degrees, according to the density of the honey. On the other hand, H. W. Brice says in British Bee Journal, "No boiling alone will destroy the spores while they remain in that condition." Evidently there is room for more experimentation to clear up the whole subject.

Rendering Wax.—In melting old combs, A. C. Miller advises, in the Bee-Keepers' Review, that the combs be placed in a strong solution of sulphuric acid in cold water about a week before melting, and if the combs are well broken up and occasionally stirred, the acid will decompose the pollen and cocoons so that a large part will remain when the crusht combs are removed for melting. Melt slowly and don't allow the wax to *boil*, else the propolis will combine with the wax. Always add acid enough to neutralize any alkali in the water that might form a kind of soap with the wax.

Prevention of Swarming seems to be more and more considered desirable, and less and less considered attainable. Nowadays there is not so much said about the great advantage that comes from the extra vigor of a newly-hived swarm, and all efforts possible are made to have as little swarming as possible, and when swarming does occur, there are probably not a great many who allow the division of forces to be just as the bees would naturally adjust the matter, but the bee-keeper tries to keep a strong force in the new colony with comparatively little regard to the strength of the old. H. H. Hyde probably voices the opinion of a large number, when he says, in the Progressive Bee-Keeper, that "by far the greatest hindrance to successful comb-honey production is swarming." Despairing of entire prevention, he limits swarming by abundance of timely super-room, a free communication separator, and blocking up hives so as to give plenty of air at the bottom.

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MAY.

Behold, she comes, the spring's beloved,
The pride of earth and sea,
With blossoms on her pulsing breast
From glen and glade and lea.
So light of step, so fair of face,
She passes on her way;
With every beauty, every grace,
The rare and radiant May.

—Farm Journal.

Bees Are Busy.

The past winter was the most severe, as low as 28° below zero. I lost 3 out of 28 colonies. All kinds of fruit are in blossom, and the bees are very busy. I could not keep bees without the American Bee Journal. Long may it live and prosper.

I. D. HYDE.

Washington Co., Mich., May 7.

Many Lost Thru Severe Cold.

Bees are booming, but many have lost large numbers of colonies on account of the severe cold weather. The losses, however, are with those who ought not to complain, as proper attention was not given the colonies in the fall. It is ever thus.

Success to the American Bee Journal.

F. A. GEMMILL.

Ontario, Canada, May 3.

Wintered Without Loss.

My 36 colonies wintered without any loss. I winter them in the cellar with bottom-boards on. My neighbors lost almost all of theirs, still they would not spend a dollar for a bee-paper! Success to the "Old Reliable." G. JOHNSON.

Clark Co., Wis., May 1.

Feeding Bees—Honey Prospects.

Will you allow me to correct Cogitator, as to my plan of feeding bees, as given on page 225? Instead of feeding every tenth hive, as stated, I reserve the surplus of every tenth hive, in full-sized frames, to feed the nine, in case they need it.

I claim it is poor policy to feed liquid honey to a starving colony, as it only stimulates brood-rearing, to require more feed. I am speaking more particularly of carrying bees over a dry year in California. If comb honey is fed bees they will economize and save feed. In carrying bees thru a dry year all we need is a normal colony. We do not need a surplus of bees when there is nothing to gather.

I am having some prospects of part of a crop of honey. I have had 40 new swarms from 64 colonies, and some of the swarms have filled their hives. But generally prospects are poor in California.

CYRUS C. ALDRICH.

Riverside Co., Calif., April 30.

No Winter Loss—Honey-Dew.

The past winter was the coldest ever witnest in this part of the country. I began the winter with 36 colonies packt in forest leaves, on the summer stands; they all came thru the hard winter all right, and didn't get out to the soft maple which is in great abundance here, till April 17, and now they are all just booming. I never had my bees in such a nice, healthy condition, and in such good shape at this time of year.

While I suffered no loss in wintering, some of my neighbors report heavy losses, some losing three out of five colonies. I don't know what gave me such success, unless the American Bee Journal did it. I credit my "good luck," as my neighbors call it, to that source.

The summer of 1898 was noted for honey-dew. There was more of that here than

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
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Add 25 cents to your order; for cartage, if wanted by freight.

Your orders are solicited.

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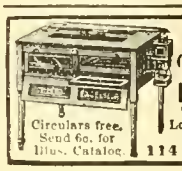

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GUS DITTMER, Augusta, Wis.
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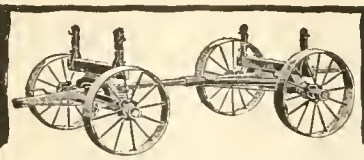

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2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

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BEES **QUEENS**
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for FREE Catalogue.
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—ALSO THE—
Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

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Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

WALTER S. POUDER,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

Please mention Bee Journal when writing.

ever witnest in these hills, and with the exception of a little in the beginning which was very dark, it was rather yellow and sweet, and most of the people seemed to like the taste of it, except the first gathered which was as black as old-fashioned cane molasses.

I hear so much pro and con about honey-dew that I wish to tell what I saw last summer. About June 23 I was going across the country and watching the honey-dew; it seemed to be in every place and on all kinds of leaves, even the weeds were covered with it. It being about 8 a.m., I lookt across under the sun, and I could plainly see the honey-dew falling, and it was coming from above the tree-tops. Now, where was it coming from unless the insects that produced it were flying in the air above the tree-tops? This is the conclusion that I have reacht.

Let some of the big lights tell, who think that honey-dew is produced by the leaves on certain timber. I for one feel sure that a great percent of honey-dew is the production of the flying insect family.

Success to the American Bee Journal and its many readers. IRA SHOCKEY.
Randolph Co., W. Va., April 20.

Bees Came Thru All Right.

My bees came thru the winter all right, but as a rule bees came out of winter a little weak. Fruit-bloom is on now, and they seem to work with unusual vigor. My first virgin queens hatch to-day. H. G. QUIRIN.
Huron Co., Ohio, May 6.

Bees Wintered Well.

My bees wintered well on the summer stands, packt in leaves. I am going to try the fence and plain sections this year.
IRA LUBBERS.
Sheboygan Co., Wis., May 8.

Unpackt Colonies Died in Winter.

Our bees have wintered well here, and are now in tip-top shape, and working every day on fruit-bloom. Nearly all the farmers have lost all their bees—in fact, I don't know of a colony that was not packt that lived thru. EUGENE HAMBAUGH.
Brown Co., Ill., May 3.

Very Backward Spring.

This has been a very backward spring. Bees had done very poorly until the last few days. J. A. ROSSON.
Ellis Co., Tex., May 4.

Good Prospects for Honey Crop.

The past winter was the most disastrous on bees that we have had in this locality since I have kept bees. The average losses will run over 50 percent, my own being 25 percent. Bees generally are weakened, and their only salvation lay in the propitious weather that has prevailed during the past four weeks. There have been only one or two days during that time that they could not forage and gather if there was anything for them to get. The bees are holding high carnival on the sugar maples at this date, which are blooming profusely this season (something that has only occurred twice in 7 years), and are building up very rapidly considering the weakened condition that early spring found them in. The prospects are very good, I think, for a honey crop for those who have any bees left. D. W. HEISE.
Ontario, Canada, May 8.

Indian Territory Fine for Bees.

The past winter was severe on my bees, and I lost a few colonies. I winter them on the summer stands. I have the advantage of a fine climate and large range of native bee-pasture. My bees commenced to swarm April 27, and up to date I have 7 swarms, and in all 90 colonies. I have my new hives

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us, as we are anxious to place our prices and goods before the bee-keepers of the Northwest. Most of our stock is

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Untested, 50 cents each; $5.00 per dozen. Safe arrival and reasonable satisfaction.

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Write me soon.
20Atf H. LATHROP, BROWNTOWN, WIS.

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CHAS. F. MUTH & SON and A. MUTH.

Honey and Beeswax Wanted.
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CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.
MRS. ANNIE MUTH (Widow.)
Cincinnati, Ohio, April 7, 1899. 15Atf

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put up and painted nicely, and am now wiring and placing in foundation. In this work I am assisted by two nice Cherokee Indian girls. (Now, say, you young fellows that don't believe this part of my letter, just take a trip down to this splendid country and see it and me, and—yes, the girls, too.)

I have a neighbor bee-man 40 miles away, a pleasant correspondent, Mr. Hairston, of the Saline district, Cherokee Nation. There is room for more bee-men here. We are expecting a change of status soon, after which outside or non-citizen people can come and settle in this fine country. We will want not boomers but good, industrious home people. After I add that this is a fine climate, that all grains, vegetables and bees, too, do well, don't ask questions, but come and see. WM. A. SCOTT.

Cherokee Nation, Ind. Ter., May 5.

May Weather in April.

The weather has been very warm here, and we had May weather in April. Cherry-blossoms are first here, and they have just opened. GEORGE CURTIN.

Middlesex Co., Mass., May 1.

Prospects Not So Favorable.

Prospects for a good season here are not as favorable as I wish they were; and I lost heavily in bees last winter and early spring. I have only about 100 colonies left, that are in condition to amount to much this season. C. MONETTE.

Fillmore Co., Minn., May 8.

A Hard Winter on Bees.

The past was a bad winter on bees. I believe fully two-thirds of the colonies died in this part of the country. I lost 35 out of 47 colonies. Nearly every one that had bees lost all. It didn't make any difference how good care had been taken of the bees, as those in the cellar and in the house died all the same. I put one colony in the coldest place I knew of, where the northwest wind had the best sweep; I didn't care for them, and wanted to freeze them out, but they came thru all right, and are very strong. Three-fourths of those I had in a nice, dry cellar and house, and took extra care of, are dead, and so it is with everybody else's bees. CHAS. SCHMUCKLE.

Bureau Co., Ill., April 14.

Heavy Loss of Bees.

There has been a big loss of bees in this neighborhood. Nearly all are dead that were wintered out-doors. A good, warm cellar was the best the past winter, where they were left in till near April. March was a hard month on bees; they died with plenty of honey in the hives. About 75 percent of all the bees are dead in this neighborhood. NOAH MILLER.

Iowa Co., Iowa, May 8.

A Hunting Trip and Report.

I have been tryiog to get time to write you ever since I returned from my annual hunting and trapping trip. I came home two weeks ago. I had a fine time, altho it was very cold; Feb. 13 it was 7 degrees below zero. I did not do as well this winter as I have done some other winters, but I caught 219 'coons, 61 minks, 2 otters, 57 opossums. I caught 2 wild hogs alive, one weighing 147 pounds, the other about 100. Deer are scarce. I saw only one all winter, and no bears.

When I got home I lookt over my 210 colonies of bees, and found a few had frozen, perhaps 10 or 15. I bought an apiary about six miles north of here last week; they are all good Italians and hybrids. The owner died last August. I got 83 strong colonies in 10-frame hives, all double-story, painted. 57 empty hives, one sun extractor, 1,000 Hoffman frames, and a honey-tank holding 137 gallons, one new Cowan extractor, 1,000

EVERY BEE-KEEPER WILL APPRECIATE THIS.

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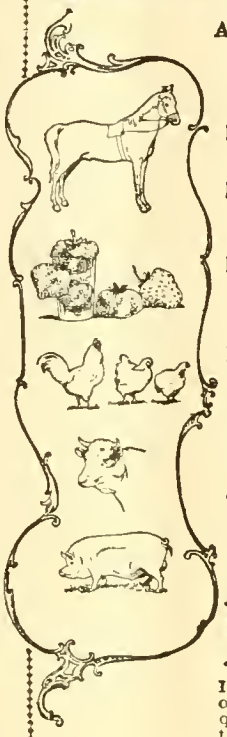

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All about Poultry; the best Poultry Book in existence; tells everything; with 23 colored life-like reproductions of all the principal breeds; with 103 other illustrations. Price, 50 Cents.

No. 4—BIGGLE COW BOOK
All about Cows and the Dairy Business; having a great sale, contains 8 colored life-like reproductions of each breed, with 132 other illustrations. Price, 50 Cents.

No. 5—BIGGLE SWINE BOOK
Just out. All about Hogs—Breeding, Feeding, Butchery, Diseases, etc. Contains over 80 beautiful half-tones and other engravings. Price, 50 Cents.

The BIGGLE BOOKS are unique, original, useful—you never saw anything like them—so practical, so sensible. They are having an enormous sale—East, West, North and South. Every one who keeps a Horse, Cow, Hog or Chicken, or grows Small Fruits, ought to send right away for the BIGGLE BOOKS. The

FARM JOURNAL

Is your paper, made for you and not a misfit. It is 22 years old, it is the great boiled-down hit-the-nail-on-the-head,—quit-after-you-have-said-it, Farm and Household paper in the world—the biggest paper of its size in the United States of America—having over a million and a-half regular readers.

Any ONE of the BIGGLE BOOKS, and the FARM JOURNAL 5 YEARS (remainder of 1899, 1900, 1901, 1902 and 1903) will be sent by mail to any address for A DOLLAR BILL.

Sample of FARM JOURNAL and circular describing BIGGLE BOOKS free.

WILMER ATKINSON
CHAS. F. JENKINS.

Address, **FARM JOURNAL,** PHILADELPHIA

A MOST WONDERFUL OPPORTUNITY.

The Farm Journal and the Bee Journal.

Offer No. 1. We will club the Bee Journal for one year and the Monthly Farm Journal for five years (as above) all for $1.40; the Farm Journal alone is 50 cents a year.

Offer No. 2. Send us ONE new subscriber for the Bee Journal for a year at $1.00, and we will order the Farm Journal for you for 5 years as a premium.

Offer No. 3. Or, send TWO new subscribers for the Bee Journal for the balance of this year at 60 cents each, and we will order the Farm Journal for you for 5 years as a premium.

Better apply soon, as we have only a limited number of 5-year FARM JOURNAL subscriptions to offer. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

Northern Queens.

IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my "Northern-bred Italians"—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queen, $3.00 each; the same with untested Queen, $2.25. Ready to fill orders by June 1. Correspondence solicited. MATE WILLIAMS,

20A4t NIMROD, Wadena Co., MINN.

Please mention Bee Journal when writing.

Headquarters FOR THE Albino Bee!

THE BEST IN THE WORLD.

If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the ALBINO. I can furnish the Italians, but orders stand, as heretofore, 50 to 1 in favor of the ALBINO. I manufacture and furnish SUPPLIES.

S. VALENTINE, Hagerstown, Md.

Please mention Bee Journal when writing.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

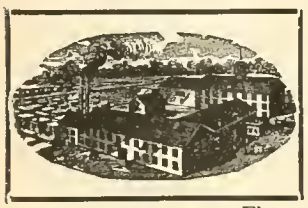
and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

Please mention Bee Journal when writing.

20 Colonies of Bees For Sale.

First-class Italian Bees, in 9-frame Langstroth hives, located in this city. Price, $5.00 per colony, or $4.75 each if taken five or more colonies at a time. Speak **QUICK** if you want a bargain. (No supers go with the hives.)

Address **GEORGE W. YORK & CO.**
118 Michigan Street, CHICAGO, ILL.



BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. *Illustrated Catalog, 72 pages, Free.*

We also manufacture **Tanks** of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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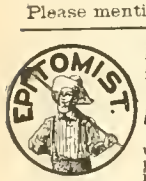
BEES, HONEY, MONEY

Queens for Business ******
Supplies at Bottom Prices.

"Bee-Keeping for Beginners," price 50 cents, imparts the instruction. Price-List free.

6E8t **J. P. H. BROWN, Augusta, Ga.**
Please mention Bee Journal when writing.



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in Agricultural Pursuits can't afford to be without the
AGRICULTURAL EPITOMIST.
Sample copy **Free to any address** upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

Address AGRICULTURAL EPITOMIST, Indianapolis, Ind.
20E26t Please mention the Bee Journal.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.
Please mention Bee Journal when writing.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

This May Bee...

EGGS ACTLY

WHAT YOU WANT. Send stamp for Illustrated Catalog and Poultry-Book of

Pure-Bred Poultry

Fertile Eggs for Hatching.
DREXEL POULTRY YARDS CO.
3611 Fifty-third Avenue, - DREXEL, ILL.
18A4t Please mention the Bee Journal.

SPRAYING
with our new patent
KEROSENE SPRAYERS
is simple indeed. Kerosene Emulsion made while pumping. 12 varieties Sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."
THE DEMING CO. SALEM, OHIO.
Western Agents, Hennion & Hubbell, Chicago. Catalogue and Formulas Free.

Please mention Bee Journal when writing.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

sections, about 10 pounds of foundation, and 27 pounds of beeswax, and lots of other tools, all for $85. I have workt this apiary since 1892, and have never taken less than 600 gallons of honey in any season, and some years with less bees than there are now. I shall divide up my home apiary, try to increase by natural swarming, and try and keep about 400 colonies hereafter.

Score one more for the golden Italians; they winter and build up better than any bees I ever had.

I can't very well get along without the American Bee Journal. J. H. SIPLE.
Bolivar Co., Miss., March 18.

"Up to Her Eyes" in Honey.

I am "up to my eyes" in honey. I began extracting last Friday, and got six gallons from the first hive. I have a dozen supers of sections ready to take off—all "neat as wax," "white as snow," and filled with "nectar fit for the gods." My bees wintered on the summer stands without any protection whatever. My first swarm came off March 25. Our honey-flow seems only begun. The American Bee Journal is a great helper.

MRS. M. M. DUNNEGAN.
San Patricio Co., Tex., May 2.

Lost All Wintered Out-Doors.

We had 13 colonies of Italian bees last fall, all in good shape. We wintered them out-doors packt in large boxes with straw, as we always had done before, but they all died, leaving lots of honey. Our neighbors' bees that were wintered out-doors are also dead. Bees that were stored in cellars did well. We are sorry that we lost our bees, but we are not going to give it up. We have bought two colonies again.

We like the Bee Journal so well. We find such good reading in it. Long may it live.

MARY J. BEIGHTS.
Buena Vista Co., Iowa, April 20.

A Great Utah Honey-County.

Here in Uinta County we are 125 miles from the nearest railway shipping point at Price, on the line of the Rio Grande Western Railway, or 100 miles south of Green River City, Wyoming. On the north are great mountain ranges that stand as a barrier between Utah County and civilization. On the east and south for many miles stretch the bad lands of western Colorado and eastern Utah; on the west lies the Uinta Indian Reservation, over which travel must go to reach the railway at Price.

"What has that got to do with bees?" you ask. Well, only this: That in spite of all these obstacles, Uinta County is fast gaining a reputation as one of the best honey-producing sections of the State, if not of the West. The honey produced here ranks very high in the market, both for flavor and color, and bee-keepers are very enthusiastic in consequence. The bees find unlimited pasturage of alfalfa, greasewood, and white clover, besides many wild flowers at certain seasons. The greasewood is very early, and the bees will be working industriously on it now in a few days. The flow of honey under normal conditions is above the average.

The business has been conducted in a rather haphazard way in the past, and honey of the very finest quality has been put upon the market, in cans of all sizes, and in barrels, or anything that could be obtained. Despite these drawbacks, and the lack of united effort on the part of the bee-men, the good quality of the article has been recognized, and the business now bids fair to become one of the leading, if not *the* leading, industries in the county.

The Uinta County Bee-Keepers' Association was organized the past winter, and matters are now assuming definite shape. Pres. C. C. Bartlett is very enthusiastic over the outlook, and, in a report read at a business men's meeting recently, gave out the statement that if the business increast

at a normal rate for the next two years, Uinta County would produce 1,000,000 pounds of high-grade honey per annum.

The output for last season—which was a poor year—was 300,000 pounds. The bee-keepers are having cans manufactured here for this season's crop, and have placed an order for 4,000 60-pound cans as a starter, with more contracts to follow.

There was a very heavy loss in bees a year ago, but the winter just past has been mild, and the losses have been very light. The faces of the bee-men are wreathed in smiles, as a great season is anticipated. Shipments are made as far as Chicago on the east, and Butte, Montana, on the north. A 10-ton shipment of old honey was sent out last week, consigned to eastern points.

J. H. HARDY,
Sec Uinta Bee Keepers' Ass'n.
Uinta Co., Utah, April 16.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.
Hutto, Texas.

Mr. Kipling Cured

By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT, Address, DR. PEIRO, Central Music Hall, Chicago.

Please mention Bee Journal when writing.

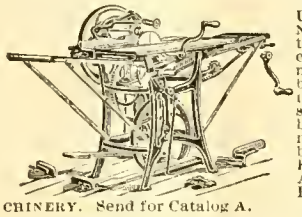
40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free. JOHN NEBEL & SON,
5Atf HIGH HILL, MISSOURI.
Please mention Bee Journal when writing.

Van Deusen Thin Foundation.

We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

THE A. I. ROOT CO.,
118 Michigan Street, - CHICAGO, ILL.

Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address
Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.



UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.
Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.
Please mention Bee Journal when writing.

THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.

FREE FOR A MONTH ....

If you are interested in Sheep in any way you cannot afford to be without the best and only Weekly Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.
Please mention Bee Journal when writing.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of ..... **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Please Mention the Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, May 8.—Not anything of consequence doing; a little honey is being sold at prices that have been prevailing for some time. White comb is scarce, but there is a surplus of dark. Extracted unchanged. Stocks light. Beeswax, 27c. R. A. BURNETT & CO.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½c.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey. M. H. HUNT.

NEW YORK, May 9.—Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 55@60c per gallon. Beeswax quiet at from 26@28 cents, according to quality.

Our market is in first-class condition, being bare of extracted honey, and demand good. New crop is beginning to arrive from the South. Comb honey is well cleaned up; some demand for white but demand for dark has ceast. HILDRETH & SEGELKEN.

SAN FRANCISCO, April 26.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Light supplies of both comb and extracted operate against any special movement in honey. Prices remain quotably as before. New crop honey will be on market in about 30 days, but the yield is certain to prove light, and there will be very little white sage, which is the best grown.

BOSTON, April 18.—Fancy white, 13c; No. 1, 11@12c; A No. 1, 10@11c; light amber, 9c. Extracted, stocks about cleaned up. Nominal price for white, 8c; for light amber, 7c. Beeswax, very light stocks; selling at 27@28c.

Naturally the demand for honey is gradually growing less, and altho stocks on hand are not large, still the demand is so small that the general feeling is weak and prices are being shaded in order to work off stocks. BLAKE, SCOTT & LEE.

KANSAS CITY, May 11.—No change in the honey market. Trade at this time of the year is naturally light. There is nothing on the market except some very dark New York buckwheat comb honey which meets with rather slow sale at 10@11c. A correspondent in Texas advises us that he will be ready to ship new comb and extracted honey shortly. PEYCKE BROS.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & CO.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season. BATTERSON & CO.

OMAHA, April 18.—There is but little stock left in dealers' hands now, and realizing that no further receipts can be expected until another crop gets into the market, it is held firm at 14c for fancy white comb. Extracted, 7½c. PEYCKE BROS.

Nuclei of Bees For Sale.

We have arranged with a bee-keeper in Lee Co., Ill., about 100 miles west of Chicago, Ill., to fill orders for 3-frame (Langstroth) Nuclei of Italian Bees, with Queens, in light shipping-boxes, at $2.75 each, or in lots of 5 Nuclei, with Queens, at $2.50 each. Address,

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.
TERRAL BROS. Lampasas, Lamp. Co. Tex
18Atf Please mention the Bee Journal.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

Please mention Bee Journal when writing.

Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,
518 Ashland Block, CHICAGO.

Headquarters of the Eclectic System.
39A1y Please mention the Bee Journal.

IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

Please mention Bee Journal when writing.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.

Please mention Bee Journal when writing

22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.

Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.

PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

G. B. Lewis Co. ..... Watertown, Wis.	J. Nebel & Son ..... High Hill, Mo.
E. Kretchmer ..... Red Oak, Iowa.	G. W. Fassett ..... Middlebury, Vt.
J. M. Jenkins ..... Wetumpka, Ala.	J. W. Bittenbender ..... Knoxville, Iowa.
Portland Seed Co. ..... Portland, Oregon.	J. L. Gray ..... St. Cloud, Minn.
E. T. Abbott, ... St. Joseph, Mo.	Pierce Seed and Produce Co. ..... Pueblo, Colo.
L. C. Woodman ..... Grand Rapids, Mich.	F. Foulger & Sons ..... Ogden, Utah.
J. Nysewander ..... Des Moines Iowa	R. H. Schmidt & Co. ..... Sheboygan, Wis.
Inter-State Mfg. Co. ..... Hudson, Wis.	Vickery Bros. ..... Evansville, Ind.
Reynolds Elevator Co. ..... Poughkeepsie, N. Y.	C. H. W. Weber ..... Cincinnati, Ohio.

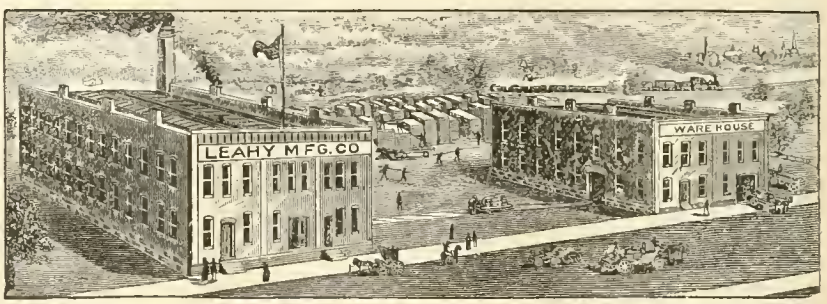
BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

Please mention Bee Journal when writing.



For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

Please mention Bee Journal when writing.

Eastern Bee-Keepers!

Furnishing bee-keepers with practical appliances to use in producing honey in marketable shape so they will receive the highest price for it, is our principal business. If you are in the EAST you will make a great mistake if you send WEST for your Supplies, wait several weeks, and pay a big freight bill, when you can get them in a few days, at as low a price, and less freight to pay. Our Catalog will explain. It is Free. THINK IT OVER. We carry a large stock and the quality is of the best. We also own two Apiaries and sell

ITALIAN BEES AND QUEENS.

These Apiaries are run for HONEY and pay well, as the bees are hustlers.

Untested Queens, 70 cents; 3 for $1.80; 6 for $2.70.
Tested Queens ..... $1.00 each.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

Please mention Bee Journal when writing.

25 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 25 cents a pound—CASH—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., MAY 25, 1899. No. 21.

MASSACHUSETTS AGRICULTURAL COLLEGE

CONTRIBUTED ARTICLES

Brood-Frame for Comb and Extracted Honey.

BY C. A. BUNCH.

HAVING used the Simplicity-Langstroth frame for 13 seasons, I think it is all right for the production of comb honey, and I like the frame first-rate; but for the production of extracted honey I would like the frame about two inches deeper. I find the frame is too shallow, as Mr. C. P. Dadant well says.

My hive for extracting has 12 Langstroth frames in the brood-chamber, and the supers are the same length and width, and hold 10 frames 6 inches deep, which make an ideal super, only that the queen is very apt to go up from the shallow Langstroth frames below and lay eggs in the extracting-combs, which causes the bees to store all, or nearly all, the honey there about the eggs and brood, which does not suit me, as I want my bees to feed themselves for winter, and place the honey in the brood-nest, enough at least to winter on.

I consider this a serious fault, but very little is said about it, and I think I will never change to a deeper frame for the brood-chamber, as it would cost too much, but what I have said may be the cause of the beginner in apiculture investigating the matter, which might be to his advantage.

FULL SHEETS OR STARTERS IN SECTIONS—WHICH?

Full sheets of foundation in sections, or starters ¾ inch deep—which shall we use? For myself I want to say it is a well known fact that full sheets of foundation in sections do not of themselves secure a crop of honey. Bear this in mind.

After experimenting along this line for years, I have time and again filled sections one-half to three-fourths full of foundation and placed them carefully on the hives only to take them off a couple of months later to scrape them and put foundation in them again. And why? Just because we had a poor season, and the bees borrowed said foundation and carried it down below. But a good season would cause drone-comb to be built in the sections, that Editor Root says would be more "gobby" eating, which I think is more imagination than real harm. Am I not about right?

REPORT FOR THE SEASON OF 1898.

I commenced the season with 87 colonies of bees in fair condition, increast to 92, and took off 1,200 pounds of honey, about two-thirds extracted and one-third comb, which is far below the average of my apiary—27 pounds.

Marshall Co., Ind.

Height to Which Sweet Clover Grows.

BY W. W. LATHROP.

THIS picture was taken to show how high sweet clover grows in my back yard. I am 5 feet 9¼ inches tall, and I hold a two-foot rule in my hand, which shows that the clover at that end of the row is 9 feet high.

The plants in the foreground are cleome pungens and gladiolus; at the right, blackberries and tomato vines; in the background, a plum and an apple tree; and in the shade of these are my five hives with bees, one of which can be seen.

Fairfield Co., Conn.

Hauling Bees to and from Out-Apiaries.

BY C. DAVENPORT.

FOR the benefit of those who haul bees to and from out-yards, I will describe the screens I use and the manner of fastening them to the hives. No nails are used, yet they are more firmly and quickly fastened over the top of a

hive than can be done by the use of nails. While there are hive-hooks made and designed to be used for such purposes, they have not proved (with me) very satisfactory, and when nails are used the hives in time become damaged, for in order to be sure the nails will hold it is necessary to drive them in a new place each time, and I much dislike to mar or damage hives in any way, for they are an important part of the means by which I earn a living, and also enable me to lay up a little each year for old age, or a rainy day, as the saying is.

Altho my method of fastening screens to hives without the use of nails or marring the hive in any way is so simple and easily employed that probably many others have made use of it, I do not remember ever seeing anything said about it. There are, without doubt, many who have not thought about it, and some time ago one of the great honey-producers of California, who hauls as many as 150 colonies at one load, described the kind of screen he used; and altho he had tried hooks he preferred nails instead, but seemed far from being satisfied with nails as a means of attaching screens over the top of hives.

The screen I use is large enough to cover the entire top of the hive, and I will say here that I consider it a very important matter when hauling bees to give them plenty of air, as the jarring and disturbance cause them to fill themselves with honey, and arouse them to such activity that they generate much more heat than when in a normal condition. While in some cases colonies can be moved without much provision being made for the ventilation of the hives, and not actually smother, I do not think they do so well for some time afterwards.

The frames for the screens should be made so that the wirecloth will be up at least an inch above the top of the brood-frames. Some of mine are made of inch thick pieces about two inches wide, and halved together at the corners. The wire screen is tackt over the entire top, and then pieces of lath are nailed on top of it around the edges, so the edges of the wire will not be turning up and catching things, or cutting one's hands.

Tho I have the frames of these screens made in various ways, they are all of such size that when placed on top of a hive the outer edge of the frame is just even or flush with the outside of the hive on both sides and at each end. In other words, the frame is just the size of the top of the hive.

After a frame is made so far, I take eight pieces of lath for each frame, that are about three inches long, and nail two pieces on each side, and two on each end of the frame. They are nailed on near the corners on the outside of the strips forming the frame. The top or upper end of each of these short pieces of lath are just up even with the wire-cloth, so the lower part of them hangs or projects down on the outside of the hive.

Now, if I have made myself understood, it will be seen that the screen, on account of these short pieces, cannot be shoved or moved out of place, either sidewise or endwise. The only way it can get out of place, or be removed, is by being raised up. To prevent its raising up, two stout strings (or perhaps very small rope more nearly expresses what I use, something like a small cotton clothes-line), are tied around the hive, bottom-board, screen and all. They are placed one near each end. If, however, the frame fits down true on the top of the hive, and there is no danger of the load being upset, one string near the center is ample. If the frame does not fit true it can easily be brought down tight, when a string is used at each end. A screen can be tied on in less time than nailed, and if tied tight enough it will hold the screen surer than nails will.

I will briefly cite an incident in support of it: One spring I sold four colonies, and was to deliver them to the buyer, a few miles away. There was one place on the road where there was a high embankment off to one side, and when I arrived at about the worst place, the horse I was driving—a powerful black one that I had recently traded for—suddenly whirled almost square around, and upset the wagon so that I with the hives went down the enbankment. Screens were tied on as I have described, and none were loosened or out of place except on one hive, which struck on a rock and was badly broken up.

There is quite a knack about tying strings around a hive, but it is easily acquired. I have a loop on one end of each string, and pass the end without the loop under the hive, then up thru the loop; the string is then placed so that the edge of the loop is even with the outside of the frame. I then draw it tight and hold it from slipping or loosening with the left hand, while tying the knot with the right hand. These strings cost but a trifle in the first place, and will last so long that they are about as cheap as nails.

I use loose bottom-boards, and have special ones for hauling, which are made just the same as an ordinary bottom-board except they have short pieces of lath nailed on at the sides and on the back end, which project up and prevent the hive-body from moving sidewise or backwards. To prevent its moving forwards, and to close the entrance, blocks are used that I will describe, for depending upon a simple strip to close the entrance, with bottom-boards that have strips around the outside to form the entrance, like the dovetailed bottom-board, with me has sometimes caused trouble. I take a strip that will just fit between the strips on the bottom-board so it will entirely close the entrance, and which is about 1¾ inches wide. Then I take another strip which is long enough to reach clear across the bottom-board, but which is only ¾ inch wide. Now to make myself clear I will say, take the shorter strip and shove it in at the entrance until only about half its width is left out in front, then take the longer and narrow piece and lay it over or on top of the short piece that projects out in front, and tack the two together with small nails that can be clincht. To hold it in place when moving, two wire nails are driven in the bottom-board in front of it. With this kind of block, if the body of the hive moves nearly an inch on the bottom-board either backward or forward, no bees can escape.

A bee-keeper who saw my screens made some in a little different way. The frames of his were just the size of the top of the hive, but the strips forming them were only ⅞ inch wide, and instead of using short pieces of lath nailed on the outside to hold them in place, he used short pieces of thick iron that had two holes in one end, and one piece was fastened at each corner of the frame on the inside of the ⅞-inch strip, so that these irons fitted down inside the hive. While he considered this way an improvement, I prefer to have short pieces of lath on the outside, as they prevent the hives themselves from coming close enough together to rub or chafe the paint off. Southern Minnesota.

An Experience with Bees in Wisconsin.

BY HERBERT CLUTE.

IN the spring of 1895 I moved here from Mauston, Wis., where the large honey crop the year before showed Clark County to be as good for honey in quantity as well as quality as any place in this State, of which the latter is the very best as to color and flavor. That spring (1895) I traded my bees at Mauston toward a one-third share in one car-load of bees that Mr. Grimm, of Jefferson, Wis., had, and which were purchast by Frank McNay, and placed in my care here.

We had a very bad freeze here on or about May 25, that killed all basswood blossoms, so as to make things look very discouraging, as the bees hardly had a pound of honey thru July to breed on, except what little the raspberries furnisht.

On Aug. 1 they began to swarm, and the hive on scales commenced to gain, the first day's gain being 3½ pounds. All thru August there was a lot of rainy weather each week that would check the honey-flow so that sometimes it would be a couple of days before the bees would gain as before. The honey harvest lasted until Sept. 5; on that day the colony on scales gained 5½ pounds, there being that day a hot wind so as to take all life out of the flowers, it checkt the honey harvest so as to stop all the nectar from flowing as before, and from then on the bees never gained an ounce of honey, still there was fine weather and lots of flowers. From the car of bees, or 100 colonies, there was an average of 100 pounds besides an increase of 28 colonies, and 400 new combs drawn out for extracting.

The next spring, 1896, the apiary was all moved 1¾ miles west, to the other side of town, just inside of the city limits, as the year before the bees all workt in that direction, on the river bottoms, which made 1¾ miles that was useless for them to travel.

That spring (1896) there was another car of bees purchast in chaff hives from Hartford, and turned in as before with 50 other colonies that I had purchast at Neilsville. All the bees were divided in two apiaries, one apiary for home yard and the other for an out-yard, which was located five miles southwest from the home yard. That season they gave a surplus of 30,000 pounds of honey, gathered from July 1 to the 30th, from basswood and willow-herb. That fall the out-apiary was brought in and placed with the home yard, and kept together from that time on, for the reason that both apiaries took more time to do the same amount of work than if both were together; and for another reason, the bees in each yard workt the heaviest

toward each other, as the big slashing lay between the two yards showed that if they all had been together there would be just as much honey gathered, besides less work to tend them all.

The season of 1897 was a very poor one in Clark County, as well as over the most of the State. In the springtime here it was very cool and rainy; strong colonies of bees dwindled down to nothing, which found lots of empty hives at the commencement of the honey-flow, which began about July 4, and lasted until July 25. The apiary gave but 25 barrels of basswood honey.

The season of 1898 was another poor one, which made two poor seasons in succession for the bees, as there was only an eight days' honey-flow that came in July from basswood. It gave an average of only 75 pounds to the colony, of extracted honey (as there is no comb honey produced in the apiary), besides plenty of honey for wintering.

The bees in chaff hives seem to do the best in the apiary, except in early spring they don't seem to get the benefit of the sun as do the bees in single-walled hives, so as to breed up as early. The rest of the season they are far ahead of single-walled hives, especially for honey.

Each chaff hive has 10 frames below (Langstroth size), and 14 to 16 above, the same size as below; while the single-wall hive has only 8 frames of the Grimm-Langstroth size.

The best day's gain in the season of 1898, in an 8-frame Langstroth hive, was 12½ pounds, while on the same day the best gain in a chaff hive was 21¾ pounds. The hot days and cool nights didn't seem to affect the bees in the chaff hives as much as in the single-wall, as the wall prevents the heat from entering, which seems to save the bees lots of labor in ventilating the hive; still, the entrance of chaff hives is not as large as the others for air.

Last winter was my first in trying to winter bees in the cellar. Eighty colonies in chaff hives were placed in the cellar, and 20 left out on the summer stands. Out of the 80 in the cellar there were 80 strong colonies taken out in the spring, while of the 20 out-of-doors 10 died, or 50 percent.

There would be an improvement on the chaff hives for winter if the top part was in band or oven shape, so as to be taken off, and not to occupy so much room.

My honey extractor is a Van Allen & Williams 4-frame reversible. It is very handy on account of the comb-basket being so near the top. The extractor is kept fastened on a stationary bench made out of matcht ceiling, 8 feet to the left from the corner of the house, up just high enough for a pail to work handy under the faucet. From that on, running toward the corner of the building, there is another bench 8 inches higher running past a large window fitting snug to the extractor, with a square hole cut in it for uncapping the combs on, and to hand to the one that is turning the extractor.

For a capping-box there is a washtub set under the hole in the bench. From the corner running to the right there is another bench built 9 inches lower, in sink shape, running past another window for light to come in to give plenty of light on combs as they are being uncapt. This bench is for a washdish and pail of water, so as to keep the hands from being stuck up, by dipping the ends of the fingers in the water once in awhile. At the end of this sink-bench there is another bench built barrel high, 8 feet from the corner running to the right. This is for an extra-large barrel to rest on to strain the honey in; also to help ripen the honey, and the common 30-gallon barrels are stood up under a faucet and filled here.

By having the honey-extractor at the left 8 feet, and the strainer barrel at the right 8 feet, it gives a chance for the one that is extracting to carry the honey across the corner, and not be in the way of the one that is uncapping, but saves room, and keeps all the dauby muss from the drippings of honey from the extractor, uncapping-box and strainer-barrel, all in one corner of the house.

With the sink-hole being placed under the strainer-barrel bench, by throwing a pail of water up by the extractor, and with the use of a broom a couple of times or so through the day, the floor will keep clean, and the dauby muss won't have to be trod in. By keeping the floor cleaned, and the water being run in a drain, the bees never bother the bee-house by trying to get in.

Over each window is a row of bee-escapes that keeps the house rid of bees that are brought in on combs, and flies also.

The bee-house is two-story, 18x30 feet. The upper story is to store barrels, to work in, etc.; while all the honey is stored on the lower floor. The bee-cellar is made of white oak, 6x8 two feet apart, and plankt.

The bee-yard is graded into a sidehill, the upper side being a 4-foot cut, while the lower side is filled in 2 to 3 feet, which leaves the bees high and dry, and still near spring water. Trees are all around the grading, which keeps the wind from the bees. By the bee-yard being graded it gives a level entrance to the bee-cellar, which is built in the bank, to take the bees in and out.

Our honey-plants and honey-producing shrubbery here are, first in the spring maple-juice from the large maple trees (as quite a lot of maple syrup is made here), besides the sap from the stumps where the trees were cut for saw-logs, as there are carloads of the logs shipt from here every year. This sets the bees to breeding very early in the spring, as they sometimes gather 5 to 6 pounds to the hive.

Next comes tag and black elder that furnish lots of pollen, with willow of several kinds out about the same time, which furnish pollen and honey. Poplar and birch-elm of several kinds blossom, and the bees breed up fast; and as the wild cherry, plum and thorn-apple blossom the bees begin to swarm, the first swarms beginning to come off about the first of May. Each of the latter three trees are so thick as to make the woods look white when they are in blossom.

Dandelions are very thick here, and help the bees out in feed the most of any of the honey-plants until basswood bloom. White clover is thicker here than in almost any other part of the State, but the bees hardly ever notice it except in the latter part of its bloom, then once in awhile there is a day that they work on it well.

Raspberry blossoms come next to the dandelions, and the bees get a little honey from them so as to keep up breeding in good shape until the basswood sets in. At the same time the basswood blooms the willow-herb blossoms. The bees get the nicest honey from the willow-herb and asters; of the latter there are several kinds, but they don't yield honey every year.

Buckwheat is very seldom noticed by the bees here for some reason, the same as white clover.

The farmers are just beginning to raise Alsike clover here, and it grows very rank; the bees work on it very well. As the land gets cleared up more, so the ground will be warmer, and farmers get to raising more clover, the honey harvests will begin to get still larger each year. The first year that I was here there was not an acre of Alsike that I knew of. The past summer there was a little sown by most of the farmers.

Grocerymen claim their customers like our honey flavor better than any other. One of the grocerymen lets the honey candy in the barrel, then he sets the barrel of honey on a table in the front part of the store, and cuts all of the hoops from the barrel, then pulls the staves off. In that way it leaves one big lump of candied honey on the table right in the show-window; the customers come in and inquire what that big chunk of sugar is. He tells them that it is honey, and then they wish to buy a few pounds, and he takes a large knife that he has lying beside it, and slices off on the top edge as you would cheese. In this way he sold a barrel of honey a week, at a profit of 4 cents a pound, while the two adjoining groceries sold but a barrel or two all winter, of the same kind of honey, as it was shipt from me at the same time. But the others kept it in the barrel. They had the barrel up at the front of the store, but there was not enough curiosity excited in that way to create an appetite, as was the case with the large cake.

Clark Co., Wis.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

GETTING THE PUBLIC TO EAT HONEY.

The Chicago convention was just level on the subject of getting the public to eat more honey. First reach their ears; and then be careful about putting any ill-tasting honey into their mouths. Don't you know, honesty, altho the *right* policy, is not always the *best* policy? Best policy sometimes has to go a long way beyond honesty. It's honest to sell poor honey, if you make the customer understand just what he is getting; but it's better policy for you not to do anything of the kind—kill your customers, and you haven't got any too many now.

HIVES WARM IN SPRING AND FALL AND COOL IN SUMMER.

But how to have black (the warmest color) on the hives spring and fall, and white, the coolest color in the summer, that problem seems rather to have floored the Chicago convention. Pres. Beers' suggestion of painting twice a year was none too practical. Tough job to paint a black hive white. A black hive completely shaded in hot weather seems to have been the nearest they got—none too near. Page 229. No one said double-walled hive, with the outer shell painted on both sides, and so joined at the corners as to be capable of being turned inside out. I have made a good many unpainted hives look respectable and white by tacking on cheap cotton cloth. I rather like the plan. In similar style a black hive could be surfaced with white cotton for summer, and "peeled" for autumn, if any one thought the matter important enough to pay for the trouble.

MAKING THE HONEY-LEAFLET EFFECTIVE.

The honey-leaflet (see editorials on page 232) is not self-enforcing, as indolent temperance folks would like a prohibitory law to be. Not much use to throw them around, in this day of advertisements knee-deep. But if you can afford to stir up a person's interest a little in the first place, and *then* give him a leaflet, some results will be likely to follow. In short, the leaflet, like any other tool, must have a workman to use it.

CURIOUS REASON FOR PROSPERITY OF BEES.

"Johnstown," on page 231, has a curious reason for the prosperity of bees in the Heddon hive—don't get meddled with so much by their bee-feverish master. Very possibly that would cut quite a figure in some cases.

BANKING HIVES WITH SNOW—"LONG-IDEA" HIVES.

Mrs. Axtell's experience (page 251) is quite an unusual one, and her prompt way of meeting it seems commendable. Bees taken out of the cellar April 1, or thereabouts, and before they had any flight a foot of snow came. Next, some enticing sunshine came along, and of course the poor bees, having been restrained all winter, wanted to fly. Now some say that bees which die on snow are merely bees that come out on purpose to die, and the only proper course is to let alone. Mrs. A. evidently belongs to the opposite (and I guess more numerous) party who regard as a calamity a grand flight when soft snow covers everything; ergo, she kept them in with well-bankt snow. She doesn't narrate the end of the struggle, whether it proved like holding a dog by its ears or not. The bee's strongest flight-maxim seems to be to keep its back toward the illuminated half of the cosmos. The snow-covered ground being brighter than the sky, it tries to fly with its back toward the ground—and makes a wreck of his voyage. Even if it gets up and starts again, inborn obstinacy makes it do the same thing right over again, until too cold to fly at all.

And so Mr. Poppleton still uses and champions the long-idea hive. First we know it will have another run; and if so we want to keep in mind some things told us on page 227. Neither Langstroth nor Gallup frames suitable (needs a deeper frame), and 16 frames not enough; hive should hold 24 at least, and a capacity of 28 would be better.

QUEENS LAYING AT WILL.

Paragraph 6 of "Beedom Boiled Down," page 250, hardly sounds candid, altho in a measure correct. The queen *can* lay at will. She also can refrain from laying for a certain length of time. What she cannot do is to refrain *indefinitely* when fully distended with ripe eggs. Probably the length of time she can refrain differs greatly under varying circumstances—time much less when she is laying 1,000 eggs a day and 2,000 on Sunday, than when only depositing 200 a day. In order to have Mr. Dadant's remark amount to much of anything, we would have to infer that the queen, in the ordinary quiet of existence in an 8-frame hive wastes eggs for want of any place to lay them. Cogitator, for one, doesn't propose to believe that without considerable proof.

"FIGHTING UPON THE INTRODUCTION OF A QUEEN."

There is an inference in paragraph 9, page 250, that might as well be halted to await proof. Natural enough to infer that a queen cannot be harmed when not a hostile bee can touch her; but when the whole cage is balled solid with infuriated bees, ejecting poison, and the queen has to exist for hours in an atmosphere thick with poison, it looks as if she *might* be damaged to some extent thereby. Cogitator has a suspicion that half of that pint of dead bees were not killed by stings, but by too great and long-continued nerve excitement, aided by poison taken otherwise than by injection.

FEARS EXCESSIVE AS TO APIS DORSATA.

I rather feel that our editor and Dr. Miller are excessive in their fears of Apis dorsata, if allowed to run wild in the South. May be they are right, tho. Looks to 'Tater as if the decrease of regular honey crops by such a cause would be small, if not infinitesimal; while the enlargement of the poor man's resources, by gathering beeswax, and his larder by gathering wild honey, would be quite cheerful in these days of monopolies, and of destruction to the independent means of livelihood.

EX-EDITOR ABBOTT DESERVES HOMAGE.

Homage to the man who would rather be *ex*-editor, and a clean man, than fat-ox editor and his hands sooty with degrading and swindling advertisements. This means E. T. Abbott—see page 249. Also, I like the ring of Abbott's article on page 245. Not of *more* importance for us to bark at the big financial seizers and Cæsars than it is for us to get after flat, straight-out dishonesty in the sales between man and man.

"AGIN" THE FEEDING OF SUGAR SYRUP.

On page 245, W. W. McNeal also stands up for common honesty, dealing stalwart blows to the practice of stuffing the brood-chamber, just before harvest, with sealed sugar syrup. And he gets in a left-hander that some of us had not fully considered before, where he says that such a performance (in addition to its dishonesty) "will most certainly be done at the expense of brood or numerical strength."

A DANCING ELDER AND THE RHEUMATISM-DOCTORS.

And so the Elder, who doesn't believe in dancing, danced when the little hot-tailed rheumatism-doctors got in their work. Well, they cured the patient in 24 hours, which regular doctors do not always do; and they were rather unique among successful physicians in making no charge—that is, no charge except charge bayonets. See page 244.

SLIGHTLY CLIPPING QUEENS RATHER RISKY.

Clipping queens *slightly* before mating, to insure mating near home, must be risky indeed if the Michigan Agricultural College had only 4 mated out of 62 so clipt. Page 241.

IMPURE MATING AFFECTING THE QUEEN HERSELF.

It is of interest to see, on page 244, that Doolittle casts in his lot with those who hold that impure mating affects the *queen herself*, and thru her exerts a *slight but perceptible* influence on her drone offspring. Of course this is much less than the one-half influence exerted on the female offspring, but there is no use to deny its reality (if it is real) as it is perfectly comprehensible, and not unscientific. Cogitator (in a mild way, and on other people's observation rather than his own) joined the same crowd quite awhile ago.

Experiments to settle the matter positively should be made, Mr. D. well points out, on German bees, or some really pure race, not on such a high-mixt and sport-inclined race as the Italians.

HOW ABOUT DIFFERENCE IN MATING?

And the boys will surely ask how it is that at Mr. Doolittle's out-apiary one queen out of six showed extra-banded

blood from five miles away, while at Mr. Hutchinson's (page 241) *none* of the queens mismated when the undesired blood was put back *three* miles. "Locality" again—but there's a locality called "The Noddle," that oft has an atom or so to do in some of these matters where doctors disagree.

COGITATOR.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY HERMAN F. MOORE.

The third quarterly meeting of the Chicago Bee-Keepers' Association was held March 1, 1899. The printed program had been mailed to about 150 bee-keepers in and near Cook County, the resulting attendance being the 50 without the hundred. Total paid membership is now 50, making our association of half a year's life the largest city bee-keepers' association in America, if I am correctly informed.

The meeting was a great success, as any one might readily infer from an inspection of the printed program. Four seasonable topics were discust. Dr. C. C. Miller was present, and helpt in his characteristic way to make the meeting interesting and profitable to all who attended.

Pres. C. Beers opened the session with an address on the aims and objects of our association, pointing out clearly and concisely the pathway to success in our chosen pursuit.

A committee composed of George W. York, Mrs. Fannie Horstmann and H. M. Arnd, was appointed by the president to draw up resolutions expressing the sense of our association on the Pure Food Law then before the Illinois legislature, and also the Foul Brood Law, and a resolution endorsing the aims and objects of the United States Bee-Keepers' Association. This committee reported a set of resolutions in the afternoon, which were adopted without change, after some discussion, as follows:

RESOLUTION ON THE PURE FOOD LAW.

WHEREAS, It is well known to the public that honey in liquid form, as well as nearly every kind and character of food, is adulterated, and yet labeled "pure;" and

WHEREAS, Many of the adulterants so used are unhealthy and injurious to the human body; and

WHEREAS, Most, if not all, of the said articles so adulterated are fraudulently sold under false labels and false representations; therefore, be it

Resolved, That the Chicago Bee-Keepers' Association does recommend and urge the passage of the Pure Food Law about to be brought before the legislature of Illinois;

Resolved, That copies of these resolutions be forwarded to Gov. Tanner and our representatives in senate and house, and that every bee-keeper in Cook County by letter or personal call urge their representatives to vote for the passage of the Pure Food Bill.

GEORGE W. YORK,
HENRY M. ARND,
FANNIE HORSTMANN, } *Committee.*

RESOLUTIONS ON FOUL BROOD.

WHEREAS, The contagious bee-disease commonly known as foul brood is destroying the honey-bees in portions of the State, and is gradually spreading; and

WHEREAS, This, like all contagious diseases, should and must be suppresst by prompt and vigorous means before the honey-bee, one of the most important factors in successful agriculture, and the great apicultural industry of this State is ruined; therefore, be it

Resolved, That the Chicago Bee-Keepers' Association recommends and urges the passage of the law for the suppression of foul brood among bees in this State, which has been introduced in the Illinois legislature by Representative Kumler, of Sangamon County; and known as House Bill No. 103.

Resolved, That copies of this resolution be forwarded to Gov. Tanner and our representatives in senate and house, and that every bee-keeper in Cook County, by letter or personal call, urge their reprentatives to vote for the passage of the Foul Brood Bill.

GEORGE W. YORK,
HENRY M. ARND,
FANNIE HORSTMANN, } *Committee.*

RESOLUTIONS ON THE UNITED STATES BEE-KEEPERS' ASSOCIATION.

WHEREAS, The bee-keepers of the United States have a common interest in the pursuit of apiculture, and the benefits and profits arising therefrom; and,

WHEREAS, A society called the United States Bee-Keepers' Association has been organized, having now about 500 members, and national in character; and,

WHEREAS, The objects of the said association as set forth in its constitution are: "To promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey, and to prosecute dishonest commission men;" and,

WHEREAS, To carry into full effect these various objects of the said organization will require much money; therefore, be it

Resolved, That the Chicago Bee-Keepers' Association in convention assembled does hereby express the fullest confidence in the ability and aims of the officers and directors of the said United States Bee-Keepers' Association, they being eminent in the pursuit of bee-keeping, and well known all over our land for their integrity and enthusiasm in their chosen pursuit; and, be it

Resolved, That each and every member of our Chicago Bee-Keepers' Association, and every bee-keeper in Cook Co., Ill., be, and are hereby advised and urged to join the United States Bee-Keepers' Association, and pay the annual dues to Hon. Eugene Secor, of Forest City, Iowa, general manager and treasurer of the association named.

GEORGE W. YORK,
HENRY M. ARND,
FANNIE HORSTMANN, } *Committee.*

The first subject—"How I Handle My Bees in Early Spring," was to have been opened by Dr. A. B. Mason, of Ohio, but his paper, which here follows, failed to arrive in time for the meeting by about 12 hours:

How I Handle My Bees in Early Spring.

To the Chicago Bee-Keepers' Association:—

Your secretary has taken the unwarranted liberty of giving me an invitation to attend this meeting of your association, and whether I can be with you or not, to give you a paper on "How I Handle My Bees in Early Spring," and saying that I may aid you "in bringing out some new ideas."

To the first part of his request I should be most happy to respond by being with you, but distance sometimes does more than "lend enchantment," and in this instance prevents my enjoying the pleasure and profit I am sure would be mine if I could be with you, and I shall have to content myself with the hope that I may aid you in bringing out something that may be of use to some of you who may have had but little experience in our truly fascinating, and oft-times profitable, pursuit.

I am glad your secretary didn't ask me to give the best method of caring for bees in the early spring, because I'm sure I should be "called down" by some for not being on the right track, that is, the way *they* do, but I can tell how *I* do, and your most cranky member can't make me lose any sleep over what he may say, for I'll not hear it.

I like to begin to "handle my bees in the early spring," along about the last of the September or first of the October previous to putting them out of the cellar in March or April, and altho it has been a long time since I began my "early spring" handling in any other way, I have not forgotten how I used to fool away my time and damage the bees with my spring foolishness.

Perhaps you'll say I can't begin my early spring work in September or October, but I can and do, and I begin in this way:

Before the first *killing* frosts come in the fall, while some honey is still being gathered, and as soon as possible after removing the surplus, I thoroly examine every colony for three purposes—to learn as to the exact condition of the colony as regards bees, brood and stores: and as I use an 8-frame Langstroth hive, with a tight bottom-board in summer and no bottom-board in winter, I proceed as follows:

I take a hive-body with a loose bottom-board, and set it

by the side, or in the place of the one to be examined. I then lift out each comb and examine it, and if all is satisfactory I place it in the empty hive, and do the same with each comb, arranging them in this way. If the hive faces the south I put a full comb of honey next to the east side of the hive, and if it faces east I place the full comb at the south side. I then place the combs containing brood next to the one filled with honey, and as near as may be in the same relation to each other as they were before I began the examination. I then fill up the balance of the hive with full combs of honey, or enough to last until an abundant supply comes in the spring.

If there is not such a supply of honey in the hive as will be an abundance for winter stores, I take full combs from supers that have been left without extracting for this purpose. I have followed this plan of preparing my bees for early spring handling for over 20 years.

Then when settled cold weather puts in an appearance, which in this locality is generally about Nov. 12, all are placed in the cellar without bottoms to the hives, where they remain until such time in the spring as they become too uneasy to safely remain longer, frequently remaining in the cellar until many of the soft maples have past out of bloom.

Before removing the bees from the cellar, if I decide to give them spring protection, I place a box made for that purpose on each stand before removing the bees. This box is made of five separate pieces—bottom, two sides and two ends—and these pieces are made of half-inch lumber of any convenient width, being held together with cleats $1\frac{1}{2}$ inches, or less in width, at each end, these cleats being placed at such distance from the ends of the side and end pieces as will allow them to be put together as shown by the sample corner sent with this, the cleats having been cut half an inch shorter than the sides and ends are high. The sides and ends are made of such length as will make the box four inches longer and wider inside than the hive is outside, and about six inches higher than the hive-body. The bottom is made of the same kind of material as the sides, and of such width and length as to go inside the box. The cleats on the bottom are placed at least two inches from each end. The box is held together at the corners by small wire nails or hooks.

When the box is ready, or at any convenient time before wanted for use, the bottom is covered with chaff or fine-cut straw to the same depth as the thickness of the cleats it is put together with, and a hive bottom-board put over the chaff, resting on the cleats and chaff. I keep the box covered from storms with a board made like the bottom, but wide and long enough to project over two or three inches on all sides. The bottom-board to my hives is long enough so that when in place in the box it projects beyond the front of the box which has to be cut to fit it, and makes an entrance to the hive.

In taking the bees from the cellar each hive is set on a bottom-board, and the entrance closed to keep the bees from escaping. The hive is then set on scales and weighed, each having been weighed when put into the cellar. It is then carried to its summer stand, and lifted from its loose bottom and set in place in the box prepared for it.

When all are in place, and the entrance fixt, I fill the space between the box and hive with chaff, or some substitute for it. It takes but a moment to do this, pressing it down just enough so that it will not settle of its own weight.

If I haven't extra bottom-boards I can get along nicely with only one extra one, by having the chaff or other material in place on the bottom of the box; the bottom-board releast by lifting the hive from it to place it in the box, can readily be put in the box where wanted.

I use enameled cloth to cover the frames, on top of which is a rimmed cover, and I fill with chaff only to the top of the hive; I then cover the enameled cloth with several thicknesses of newspaper, and replace the cover.

I keep the entrance opened or closed, as the weather may indicate, so as to help the bees maintain a proper temperature in the hive, frequently closing the entrance at night and during cool days.

As soon after the bees have had a good cleansing flight, as the weather will admit, I examine every comb to learn about the strength of the colony, the amount of brood and stores, and whether queenless or not. If I find the colony in a satisfactory condition, I close the hive and let them alone for ten days or more, according to their apparent condition as seen from the outside, or by turning up a portion of the enameled cloth.

If I find any colony short of an abundance of stores and otherwise in good condition, I supply the lack by removing one or more combs having the least honey and no brood, and supply their places with combs more or less full of honey, that have been saved for this purpose from the previous year.

If I find a colony weak in numbers, but strong enough to be worth building up, I put the bees on as many combs as they can profitably use, and contract the brood-nest with a division-board, making sure that they have plenty of stores. Sometimes I put the colony in the center of the hive, using two division-boards, and fill the spaces between the division-boards and sides of the hive with chaff.

If I find a colony queenless I make the entrance as small as will allow the bees rather a close passage to guard against robbing, and leave it until a pretty cool evening, when I remove the covering of the weakest colony with a queen, and place a queen-excluding honey-board in place of the covering, and when all are quiet carefully set the hive with the queenless colony on it, leaving off the bottom-board. The bees of the queenless colony will readily go to the colony with the queen, and, in my experience, without any quarreling. I have united weak colonies in the winter in the cellar in this way, leaving out the queen-excluder, and had no trouble.

If I find colonies with queens too weak to be profitable, I remove such queens as I care least for, and unite two or more as may seem best, as above, uniting but two at a time.

If I don't find plenty of unsealed honey in the hive I uncap some, unless the bees are able to gather some from the fields, for they seem to build up more rapidly when they have a supply of uncapt honey.

In a week or ten days, more or less as circumstances may indicate, I give another examination as at first, treating them in the same way. Sometimes, but rarely, I find too much honey in the hive, being so full that the queen does not have the room needed for depositing eggs. In such cases I replace one or more combs of honey with empty, or nearly empty, ones, always leaving an abundance of stores.

If I do not give spring protection I do just the same as where protection is given, only that when I give the first examination I furnish each colony a hive with a tight bottom in this way:

I nail a bottom to a hive-body with four nails an inch and a quarter long. That will hold the bottom on firmly, and still permit of its easy removal when I prepare the bees for winter quarters. I remove the colony I wish to examine from its stand, usually placing it in the rear of where it was, and place the empty hive with the tight bottom in its place. I then proceed to remove the combs from the full hive to the empty one, examining them and arranging the entrance according to the needs of the colony, and the weather.

When the combs have all been removed from the old hive, any remaining bees are brusht or shaken into, or down in front of, the new hive.

The loose bottom is then nailed to an empty hive which is then ready for the colony next examined. This process is repeated until all have been examined, and each colony is treated in the same way as where spring protection is given, but I much prefer to have all colonies protected..

I keep a record of everything I do to a colony, and also what *it* does. This record I keep either on a piece of heavy card-board, a piece of section, or a small piece of smooth, thin board, like a piece of planed shingle.

Your secretary didn't ask me to give any *reasons* for my way of doing, but perhaps he will allow me to say that after a good deal of experience in stimulative feeding in the spring, I have found that with plenty of sealed stores in the hive the bees will do the best for me in getting strong colonies. Of course, the queen must have room to "spread herself." I have also experimented in spreading brood to hasten brood-rearing, but it takes too much time and attention to make it at all profitable for me.

Lucas Co., Ohio. A. B. MASON.

[Continued next week.]

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

The Premium offered on page 254 is well worth working for. Look at it.

QUESTIONS AND ANSWERS

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

T Supers Shorter than the Hive.

In your answer to "Missouri" on page 279, you say: "No, the T supers are shorter than the hives and don't need anything to fill out the ends." I would like to know what kind of supers you use shorter than the hives. Mine are the same length as my hives and I don't need anything to fill out to the end. The case holds 24 sections, and they fit up close to the end. I would like to have some more of them, but I believe the manufacturer has gone out of the business. Do you know of any one that is making that style? I sent to Mr.—— for some T supers, and he sent me some slat supers, and I don't like them a little bit. I want nothing but T supers with the T turned upside down when in use.

IOWA.

ANSWER.—The T supers I use are of the plainest kind, the sides and ends being of ⅞ stuff and the inside measurement 17⅜x12⅛. Of course that must be shorter than a hive that takes frames 17⅝ long. Some object to the looks of a hive with a shorter super on it, but it isn't best to sacrifice too much for looks. If yours are the same length as your hives, the super being for 4¼ sections, and the hive taking frames 17⅜ long, then the ends of your supers must be made of stuff thicker than ⅞. I prefer to dispense with the additional weight, even if it doesn't look quite so well. I think you ought to have no trouble in getting T supers from any of the leading manufacturers. Certainly no one should send you slat supers if you order T supers. Possibly you merely ordered supers without specifying what kind, for Mr.—— is agent for——, and they have T supers in their list. But they make the super the same length as the hive by adding a cleat at each end, which is not a bad plan.

Combs of Honey Left by Dead Colony.

I have eight frames of comb left by a colony that died recently; they are all partly filled with honey and some are mildewed. What can I do with them? If I put them under a colony will not the queen take possession and lay there? Or can I hive a swarm on them in their moldy condition?

JERSEY.

ANSWER.—Nothing would be more desirable than to have the queen take possession and lay in the combs, if she needs the room. If desired, however, an excluder could be put between the two stories. It would be better to have the bees clean up the combs before offering them to swarms, as a swarm is more fastidious about such matters than a colony having brood, and might not be willing to stay on mildewed or moldy combs.

What to do with Empty Combs.

I lost some bees the past winter, and they left some nice, bright combs. What can I do with the empty combs?

KENTUCKY.

ANSWER.—There is no better way than to let the bees of a strong colony take care of them till swarming-time. See reply to "Cary," on page 311.

Making Increase by Dividing.

Would you advise in making one increase from each parent colony as follows, to take one frame which has the queen and bees on it and put into a new hive just when the old colony has new queen-cells started? I don't wish to buy a new queen for the old colony. I have movable-frame hives.

INDIANA.

ANSWER.—Of course it will cost you less money to follow the plan you propose than to buy new queens. Whether it will work all right depends somewhat upon further details. If you mean that as soon as you find queen-cells started you'll take one frame of brood with adhering bees and queen, put it into a new hive on a new stand, leaving the old hive without further attention, it won't do at all. But you might wait till one or more cells are about ready to be sealed (the difficulty is to know just when that is, for as soon as one is sealed the colony is likely to swarm), then put your frame with brood, bees, and queen into the new hive, brushing into it also about half the bees from the old hive, set it on the stand of the old hive, leaving the old hive beside it, and a week later take the old hive away and set it on a new stand. There would be no advantage in that over letting the bees swarm naturally, but from your question it is a possible thing that you cannot be on hand to take care of the swarms.

Young Bees Thrown Out.

1. Mornings, when I go to my bee-yard, I find young bees on the bottom-board dead. Some are white yet and some are brown. What is the trouble?

2. I find some worms on the bottom-board. Do they crawl out, or do the bees carry them out? NEW JERSEY.

ANSWERS.—1. If there are many of them, it is to feared that the bees are about at the starving-point, and are sucking out the juices of the larvæ and throwing out the skins. If, however, they are fully matured young bees—which may be the case from your saying some are brown—then the probability is that the wax-worm has made the trouble by making its silken galleries through the brood-combs.

2. Likely they were thrown out of the combs by the bees.

Black and Mouldy Combs.

I wish to ask about two colonies I bought one month ago. They were in very poor shape, and after it got warm enough to examine them I found the combs mostly all black and mouldy, and dead bees piled up on the bottom between the combs. I got them into a clean, new hive all right, and they seem to have started to work. Of course, I had to put the old frames that had honey in them into the new hives with some frames of foundation, but the combs in the old frames are all out of shape, and I wish to have them replaced with new frames with sheets of foundation. Will it be safe to take them away from the bees when the fruit-trees are in bloom? or when would be the best time to do it?

WISCONSIN.

ANSWER.—If your bees are busy on fruit-bloom or any other flowers, you may make the change at once, but likely you may as well wait till they are at work on clover. Indeed, it will be easier to make the change when the colonies are stronger, and you must look out not to waste any worker-brood that may be in the old combs. One way is to have these crooked combs with brood in another story either above or below the one the queen is in, with a queen-excluder between. The combs that have no brood in them may be taken away at any time without ceremony, providing it doesn't take away honey that they need. But don't feel troubled about the blackness of the combs. That's just what the bees like.

Entrances in the Supers—Excluders.

I am desirous of knowing whether, if in running for extracted honey and using honey-boards, the bees would gather, or rather fill up the supers, more readily, if the entrances were made in them? If this would not work well, how should I go about it? Do you think I would obtain more honey by not using excluder-boards?

We are having a fine season of it this year. Bees are gathering immensely from the logwood (which we have in abundance). I shall take pleasure in sending a sample of this (logwood) honey, next mail. JAMAICA, April 25.

ANSWER.—Entrances in supers from outside have been tried, but I don't remember that any one who has tried them has reported favorably. There seems to be a desire on the part of the bees to enter where the brood is. Moreover, if bees entered supers without first entering the brood-nest, they might put more pollen in supers than would be desired. It's better to have no pollen in extracting-combs.

The general opinion is that it is better to use excluders, and that they are no great hindrance. If you have your brood-chamber large enough, there is not so much need of excluders.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee $1.00 per Annum.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. MAY 25, 1899. NO. 21.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Canadian Pure Honey Bill.—The text of this bill, for which S. T. Pettit workt so hard, is given in the Bee-Keepers' Review and in Gleanings, in which appears the following proviso:

"Provided that this Act shall not be interpreted or construed to prevent the giving of sugar in any form to bees, to be consumed by them as food."

This does away entirely with the charge that the bill was intended in any way to punish a man for feeding needy bees.

"Supply-Dealing Editors" is the heading of an editorial in Gleanings in which Editor Root "talks back" a little to Messrs. Doolittle and Hutchinson, who seemed to feel a brake was needed with reference to booming new things. He says fence separators are no new thing, nor are plain sections. For about ten years plain sections have been used by Mr. Aspinwall, and fences by Miles Morton. B. Taylor, W. S. Pouder and others advocated the same general scheme years ago. He mentions that thick top-bars had been used by J. B. Hall and others for years before Dr. Miller and he began to push them, and he gets in a sly dig at Doolittle, by saying that Doolittle at first opposed these same thick top-bars and now advocates and uses them. He does not claim that drawn foundation was an entire success, but as the experiments and necessary machinery cost $2,000, and less than 200 pounds of the product were sold, thus making the loss fall upon the manufacturers, he thinks bee-keepers ought not to complain very bitterly, especially as the new thin-base foundation has resulted. Even if some of the things advocated have been abandoned, Mr. Root says:

"In order to make progress in any branch of industry, some things have to be tried and discarded. In the apicultural world it would be strange if something did not have to be thrown overboard."

The Official Year-Book.—The Department of Agriculture's Year-Book is ready for distribution. An edition of 500,000 copies has been provided, of which 470,000 will be at the disposal of congressmen. Write your senator or representative in congress, therefore, for a copy of this work. It is of unusual interest and value this year.

The Adulterated Food Investigation, which we mentioned last week, closed for the present here in Chicago, Friday, May 12. On that date we, with Secretary Moore and Vice-President Mrs. Stow, of the Chicago Bee-Keepers' Association, appeared before the Senate inquiry committee, to testify concerning the adulteration of honey as practiced here in Chicago. The Evening Post of May 12 had the following condenst report of the proceedings, which of course doesn't show nearly all of the testimony given:

ADULTERATION OF HONEY.

The early part of the session was not unlike a convention of bee-keepers. Up to nearly noon the committee was hearing statements from bee-keepers as to the adulteration of honey. George W. York, editor of the American Bee Journal, said to the committee this practice was being carried on at present to an alarming extent. It was not the bee-keepers, he said, who were doing this, but the jobbers almost exclusively. The only adulterant he knew of that was used was glucose, and the fact that the jobbers were resorting to fraudulent methods, in his mind, was ample proof that some legislation is necessary to protect the bee-keepers. The object of adulterating honey was solely for pecuniary purposes. Glucose, he said, was worth probably one cent a pound, while pure honey in the liquid was worth 7 or 8 cents. Only in the liquid form, he thought, was there any adulteration. That honey which is bought in the comb is always reliable, because there is no way for manufacturers to successfully imitate the work of the busy little insects in making combs. Some jobbers, he said, put some honey in the comb into a glass jar and poured glucose over it, giving it an appearance as if the honey had run out of the comb into the jar. The presence of comb in such quantities of liquid honey was in itself, witness stated, ample proof that it had been adulterated, for no "first-class" bee-keeper ever put up liquid honey mixt with the comb.

Senator Harris askt witness if any attempt ever was made to feed bees with glucose in order to make the product larger. Mr. York told of an instance where 300 colonies of bees were taken into Mississippi, and an attempt was made to feed them with glucose. The result was that all died. It would be useless to try this experiment, he said, because bees would not eat glucose to any great extent.

NO PRESERVATIVES ARE USED.

Witness said no preservatives were used in honey; that there was a great possibility of honey granulating, but so far as he knew there was nothing done to prevent this, excepting to abstract the honey from the comb and put it on the market in this form. He quoted a statement from one of the adulterators of honey, who said the honey he put on the market for his customers contained seven-eighths glucose and one-eighth pure honey, which he considered really was glucose adulterated with honey, rather than the reverse; but it was sold as "honey."

The only aid the bees are given in producing honey, according to Mr. York, was the furnishing by the owners of a base for the combs. These manufactured bases are the size of the box which contains the honey-comb, and are placed in the middle of the box to help out the insect, as well as to guide it in making perfectly straight tiers of cells. These bases are made of beeswax, and are perfectly pure,

according to witness. There had been experiments made, he said, with a mixture of paraffine and beeswax, but the former had proved too susceptible to heat, and would not answer the purpose at all.

Mr. York was followed by Mrs. N. L. Stow, of Evanston, who is vice-president of the Chicago Bee-Keepers' Association. Mrs. Stow has kept 80 colonies of bees, and her knowledge of the industry has gained for her the position she holds. Her testimony corroborated that of Mr. York, as also did that of Herman F. Moore, secretary and treasurer of the association, who took the stand after Mrs. Stow had finisht.

It is the intention of the Senate committee to print all the testimony they may gather as to the adulteration of all kinds of food, and present it to Congress at its next session, and then doubtless an attempt will be made to enact a national anti-adulteration law. We endeavored to impress upon the committee the urgent need of statutory law against all forms of adulteration, including honey, of course. We hope that our testimony will do good. We were glad of the opportunity to give the committee all the information we possibly could.

Mr. Moore and the writer gathered up about a dozen samples of honey—both adulterated and pure—which we placed before the committee. Prof. Wiley suggested that we forward them to his laboratory in Washington, where he would analyze them and then report.

The Reformed Spelling.—Mr. Stenog, in Gleanings, has this comment on our spelling-reform effort:

Mr. York spells "burr-comb" with one *r*, but spells *fuzz* with two z's, instead of *fuz*. Why not go the whole length and spell it cel, wil, *be* for *bee*, etc.? The new spelling is certainly misleading when *past* is used for *passed*. A law that was *past* last March has ceast to be a law at that time.

Does Stenog object to going by the dictionary? "Bur" is given as correct spelling in the Standard, but "fuz" cannot be found there. There is no objection whatever, "in this locality," to spelling cel, wil, and be for bee, unless it be that some people are so conservative that they prefer to hold on to the old no matter how bad it is. Some printer's ink is wasted in printing cell, will, and bee. As to passed and past, there's no need of spelling a word wrongly just because it has two different meanings. Perhaps Stenog would like bat spelt with two t's when it has wings, so we will know he is not talking about a ball bat. Most people who have learned how to read, know the sense intended simply from the particular way in which a word is used that has different meanings, tho spelt the same. Of course, Stenog, who writes shorthand, *always* writes "past" for "passed" when taking dictations. Pretty good joke on him, when he criticises a spelling that he uses himself, and must necessarily endorse.

It's a fine thing for Gleanings that Stenog isn't several hundred years old, for if he were he would still want to keep on spelling as they did in the 16th century, a sample of which we reproduce here, showing how the first ten verses of the eighth chapter of St. Matthew were once printed:

When Iesus was come downe from the mountayne, moch people folowed him. And lo, ther cam a lepre and worsheped him saynge: Master, if thou wylt thou canst make me clene. He putt forthe his hond and touched him, saynge: I wyll, be clene, and immediatly his leprosie was clensed. And Iesus said vnto him: Se thou tell no man, but go and shewe thy silf to the preste, and offer the gyfte that Moses commaunded to be offred, in witnes to them. When Iesus was entred into Capernaum there cam vnto him a certayne Centurion, besechyng hym and saynge: Master, my servaunt lyeth sicke att home of the palsye, and is grevously payned. And Iesus sayd vnto him: I wyll come and cure him. The Centurion answered and saide: Syr I am not worthy that thou shuldest com vnder the rofe of my housse, but speake the worde only and my servaunt shalbe healed. For y also myselfe am a man vnder power, and have sowdeers vnder me, and y saye to one, go, and he goeth, and to anothre, come, and he cometh; and to my servaunt, do this, and he doeth it. When Iesus herde these saynge, he marveyeled and said to them that folowed him, Verely y say vnto you, I have not founde so great fayth: no, not in Israell.

Mr. R. F. Holtermann, of Ontario, Canada, editor of the Canadian Bee Journal, writing us May 11, said:

"The prospects here for honey are excellent, and I do not know that the bees were ever in better condition, or had more favorable weather since the growing season came on."

* * * * *

Dr. C. C. Miller, of McHenry Co., Ill., spent Monday night, May 15, with us, when on his way to attend the annual convention of the Illinois Sunday School Association, at Decatur. The Doctor was feeling well physically, and is as good-natured and young-hearted as ever. He lost about half of his bees in wintering, owing to honey-dew stores, principally, he thinks. He put 280 colonies into the cellar last fall, so his loss amounts to quite a good-sized apiary.

* * * * *

Mr. Frank Zillmer, one of our subscribers and a bee-keeper of Crawford Co., Wis., was recently married to Miss Emily Birchard, of Grant County. The local paper, after announcing the event, remarkt as follows:

"The bride is well known to our readers, and has a host of friends who join with us in wishing her and her husband (who is a very successful apiarist) bon voyage thru the journey of life. Mr. and Mrs. Zillmer will remove at once to their new home, where everything is in readiness for housekeeping."

We wish to add our congratulations and best wishes to the happy couple. We trust that their troubles in life may be ONLY LITTLE ONES, that afterward may prove to be blessings.

* * * * *

Mr. J. H. Martin—equally well known by his other name—Rambler—says this in Gleanings:

"We think we are doing the appropriate thing in Southern California when we have a bee-keeper by the name of Honey; but in the northwest portion of Oregon there is a town named Apiary; also a man bearing the same name."

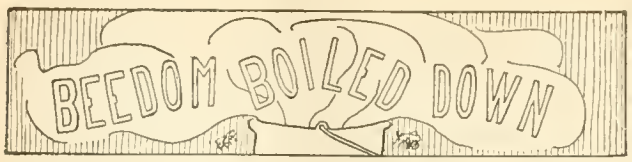
We wondered when we read the above paragraph whether in that Honey family there were any marriageable daughters. If so, we haven't the least doubt that Rambler knows all about them. He's a great investigator, and would be particularly so when it came to a young lady who is sweet both in name and nature. But to exchange so mellifluous a name as "Honey" for that of Martin or Rambler—I doubt if she could be persuaded. You'd better ramble on, Mr. Rambler.

* * * * *

Mr. R. C. Aikin, of Larimer Co., Colo., writing the Progressive Bee-Keeper, April 27, 1899, had this to say for himself:

"As you already are aware, I am a very busy man, and to add to my many duties, I have just past thru a political campaign in which I was not only a worker, but was on the ticket, and am now 'in for it' to serve our little city as a councilman for the next two years. May the Lord help us to rout every whisky-selling scheme that dares to ply in our midst. We won the election with a full ticket and a round majority."

We wish to extend to Mr. Aikin the heartiest kind of congratulations upon his political success. We hope he and his fellow councilmen will have the courage to enforce the laws they have, and make better ones if they need them. We think the quickest way to educate a community up to the level of good laws, and a desire to see them enforced, is just to enforce them for awhile and thus demonstrate to the people the pleasure to be derived from living in a respectable town or city. It is now 15 years since we lived in a place where the laws were enforced. Here in Chicago it is almost true to say that only the laws that suit the politicians are enforced. No attempt whatever is made to close on Sunday the front entrances to hell (saloons), tho there is a State law that would close them if enforced. And it makes no difference which party is in power here, as elsewhere—both want the saloon vote, and so cater to it.



Painting Queens.—Instead of clipping the queen's wings, C. Boesch advises in D. Imker to paint her thorax a bright color. That would make it easy to tell whether a queen had been replaced by the bees, and in case of a runaway swarm it would be possible to prove property.

More Wax and Less Honey is somewhat favored by W. A. H. Gilstrap, in Gleanings. He gives some figures which seem to show that under some circumstances, instead of extracting and saving the combs to use over again, it is possible it might be better to melt up the whole and get more than twice as much wax.

Density of Buckwheat Honey Varies in different localities, according to a discussion reported in the Canadian Bee Journal. Mr. Brown said it was thinner than other honey. Mr. Darling had it average 14 pounds to the gallon, and so thick that he could lift 1½ pounds with a spoon. In a dry season it was said to be thicker than in a wet one.

Importance of Good Queens is urged by J. J. Cosby, who rears his queens by the Doolittle plans and thereby accounts for the fact that his bees in a poor season secured 72½ pounds per colony, spring count, and increast from 80 colonies to 100, while a neighbor with 23 colonies got 56 sections in all, and another neighbor with 60 colonies got nothing, all three apiaries working on the same field.—Gleanings.

Bees and Colors.—Elias Fox discusses this matter in Gleanings. He gets many stings with black pantaloons, but very few with light ones. A black ribbon or feather worn by his wife is a distinct point of attack. If he wears no veil, the attacks will be upon the mustache, eyes, eyebrows, or right under the hat-rim, and nine times out of ten a sting on the hands will be near or under the shady edge of the sleeve. A team of horses past his apiary; the white horse escaped with few stings, while the dark bay with black mane and tail was stung to death.

Taking the Travel-Stain Off from the surface of section honey, according to an editorial in Gleanings, is a thing that may yet be accomplisht. Byron Walker is confident that he has discovered a successful method. If it is true that the dark color of sections is due to bits of old comb brought up from the brood-combs, it hardly seems that the sections can be made white otherwise than by reversing the process and removing the outer portion, a thing that seems hardly possible of accomplishment. Mr. Walker will certainly do a great service if he gives a successful plan.

The Hungarian Bee is praised in Bienen-Vater by Maurus. An inexperienced eye cannot distinguish it from the Carniolan. But its flight is different. It goes straight as an arrow, while the Carniolan has a more circling flight. It is grayer than the Carniolan, with yellowish rings and yellowish down. In southern Hungary it is almost as highly colored as Italians. It is more inclined to swarm than the Italian, but less than the Carniolan. It also holds middle ground between the Italian and the Carniolan as to the amount of brood reared. Among the places to which it has been sent are mentioned Illinois, Ohio and Kentucky.

Albinos as to Wintering.—J. O. Grimsley reports, in the Ruralist, that the winter in Tennessee was exceptionally severe, the mercury at one time going down to 20 degrees below zero. In an apiary composed of albinos and Italians he reports the loss not so heavy as expected, but says:

"To our surprise it was confined mainly to the albinos. A few light colonies of Italians were lost, and we barely 'saved seed' of the albinos. We were not surprised so much at the loss of albinos, as we expected a greater loss all around, but the test has proven that for the extreme North and severe winters, albinos must be well protected.

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120-122 W. Broadway, NEW YORK. **HONEY,** Beeswax, Maple Sugar and Syrup.

We desire to inform our friends and patrons that our firm has been re-organized and additional capital added. The business will be conducted under the firm name and style of

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at the old stand, where we have had the pleasure of serving our friends for the past 11 years. Management and supervision will be the same and our business methods—those of square and honest dealings—will be practiced as heretofore.

We believe we have now the esteem and confidence of our shippers thruout the country, and that our dealings, as a rule, have been of the most pleasant nature.

Our additional capital will put us in position to increase our already large business still farther, if possible, and at the same time enable us to treat our shippers even more liberally than heretofore, in making advances, etc.

Records will show that we handle by far the bulk of all the honey sent to our market. We make honey the principal part of our business, are personally acquainted and have trade connections all over the country, which enable us to handle any amount of honey to better advantage than any other house.

Old shippers know us and will bear us out in what we have said. Those bee-keepers who do not know us and have had no dealings with us, we would cordially invite to correspond with us and make our acquaintance. We not only handle on commission but buy largely as well, from small lots to carloads, for spot cash.

We wish to call the attention of the Southern bee-keepers to the fact, that our market never was in better condition than this season. Old stock is disposed of and the market is bare, with a good demand. New crop will find ready sale and at higher prices than have ruled for years past. We would advise them to send their honey, while there is a good demand at good prices, as later on conditions of the market may change.

We also handle **MAPLE SUGAR AND SYRUP** very extensively, and would be pleased to hear from those having any of these goods to offer.

In conclusion, we wish to extend our thanks to all of our shippers for their past favors, and trust to receive their kind consideration in the future.

21A4t Please mention the American Bee Journal.

Root's Column

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Our extensive enlargements last fall, costing in the aggregate some $15,000, enables us to keep pace with our increasing trade. Send in your orders, and they will be promptly executed, either from the main office or branches and agencies. Give us a trial, and see how quickly we can make shipment.

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MEDINA, OHIO.

GENERAL ITEMS

The Farmer.

What higher fate for man can wait
Than 'neath the overarching sky
To sow and reap, to tend and keep
The fertile fields that round him lie?
Small pleasure springs from joys of kings
And richer is his lot by far,
Whose life is spent in sweet content
Where hearth and home and loved ones are.
—Farm Journal.

Apiculture Prospering.

I could not help noticing what a change there is in the "Old Reliable;" it seems it is crowded more and more with such valuable information, especially the last two weeks.

Bees are now about getting up to their original working order. Prospects are good for a fine honey year. White clover is beginning to bloom, and locust also in full bloom. Everything pertaining to apiculture seems to be prospering, and if we have a few seasonable rains the bees and we will do the rest. J. WILEY MOUNTJOY.
Anderson Co., Ky., May 11.

Severe Winter on Plants and Trees.

The past winter was perhaps more severe on plants and trees than any other year in the memory of "the oldest inhabitant." Roses called hardy were killed to the ground, altho well protected. Many soft maple trees are badly injured, and I think many ash trees are killed outright. Farmers report that red clover is almost entirely killed, but, somewhat strangely, white clover seems to be uninjured C. C. MILLER.
McHenry Co., Ill., May 20.

Bad Weather for Bees.

The weather has been very bad for the bees. We have had just a few days that they could work with any comfort.
LEWIS LAMKIN.
Woodbury Co., Iowa, May 16.

Bees Wintered Poorly.

Bees wintered very poorly here the past winter. My neighbor lost 60 colonies out of 65. I lost one-half, which is 50 colonies. My bees are now in very good good shape. The American Bee Journal is the boss of all the bee-papers I ever read.
OLIVER CARON.
Red Lake Co., Minn., May 14.

Wintered Without Loss.

My four colonies of bees wintered on the summer stands packt in chaff and sawdust without any loss. A. SHAW.
Grant Co., Wis., May 14.

Shake?—What's the Use?

Have you ever reflected on the uselessness—nay, the absolute danger attending the usual promiscuous hand-shaking? It is a meaningless custom with the majority of people, in which no sentiment or genuine interest enters. This fact is apparent enough on the mere observation how this perfunctory salutation is accomplisht.

Two persons meet who entertain no special regard for each other, but each extends a "flipper" and mechanically shake each others' fingers. What's the use?

But let us consider the more dangerous results that not infrequently occur. Here comes a man with whom you shake. In a week or two your hands begin to tingle and soon you find you have caught the itch! This you generously give to your family and friends to keep them busy scratching. Eczema is often contracted in this neigh-

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
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Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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SILVER GRAY CARNIOLAN —QUEENS—

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Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

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HATCH CHICKENS BY STEAM—with the simple, perfect, self-regulating **EXCELSIOR INCUBATOR**

Thousands in successful operation. Lowest priced 1st-class hatcher made

Circulars free. Send 6c. for Illus. Catalog.

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DO NOT FAIL

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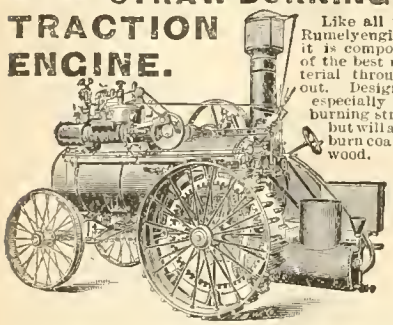
STRAW BURNING TRACTION ENGINE.



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2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

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BEES QUEENS
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for
FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.
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Northern Queens.

IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my Northern-bred Italians—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queen, $3.00 each; the same with untested Queen, $2.25. Ready to fill orders by June 1. Correspondence solicited. MATE WILLIAMS,
20A4t NIMROD, Wadena Co., MINN.
Please mention Bee Journal when writing.

PAGE

THE WHITE MAN'S BURDEN

of responsibility to the **fence question** is discharged to the extent that the **Page** is introduced. Have you taken it up?

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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WALTER S. POUDER,
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borly fashion Nor is that the worst. Here comes an exuberant chap whom you may never have seen, but shake he will. You take hold of his hand in good country fashion, to soon learn what a clammy, slimy thing you've had hold of. May as well shake the tail of a fish. But note that eruption on his hands, and the evil smell he has imparted to yours! If in your enthusiasm you have not thereby contracted a case of syphilis that will cost you $100 to cure, it has simply been a matter of good luck rather than good judgment.

I have been vext more than once at my cowardly weakness in not refusing to shake hands with some, when I instinctively desired to go and wash my hands immediately afterward. The nastiness was abhorrent! I have learned, however late, to ignore the extension of an unknown hand to me. I simply don't see it, and go on saying what I otherwise would. This seldom gives offence.

Next to the women's habit of kissing (even women they dislike), promiscuous hand-shaking is the most repulsive.

DR. PEIRO.

Bees Doing Fairly Well.

Bees are doing fairly well. It is very dry, and we have to feed. I have about 300 colonies. E. H. STURTEVANT.
Washington Co., N. Y., May 10.

Bees in Fine Condition.

My bees never were in finer condition at this time of the year, and I only wish I had been prepared to get some of this fine willow honey in the section boxes.

MATE WILLIAMS.
Wadena Co., Minn., May 12.

Good Prospect for Honey.

It has been rather discouraging so far. The loss of bees around here is about 50 per cent. My loss is three-eighths. North of here there seems to be nothing but beeswax left. Prospect for honey is good.

GUS DITTMER.
Eau Claire Co., Wis., May 12.

Great Mortality Among Bees.

I am sorry to record the great mortality among the bees in this locality. Nearly all the bees have died, fully four-fifths, if not more, have succumbed either to the long, cold winter, or honey gathered from sources that proved destructive to bee-life. I think perhaps both combined may have added to the great loss. What few colonies survived the ordeal seem to be weak, and will need good nursing to bring them thru. I had 38 colonies, part of them in the cellar; out of that number I have three left, and two of them are very weak. All that were left on the summer stands perisht. One of my neighbors had about 65 colonies, and he has three or four left, and they are weak. So it is all over this county, so far as I can hear, many having lost all. The weather is against us now, as it is cold and quite rainy. Fruit-trees are in bloom, but are of little account to the bees—too wet and cold for them to be out much. L. ALLEN.
Clark Co., Wis., May 10.

What I Know About Honey-Dew.

I have seen honey-dew fall more than a score of times, not as dew, but just like small drops of rain, and I have seen it fall on the leaves of the trees and spatter just as a drop of rain will; then the dew at night thins out so that it spreads over the whole surface of the leaves, and while it is damp the bees gather it. They can't gather it when it is dry and hot.

This is not theory; any man can see it for himself if he will take the trouble to step out to some clear place, when there is a heavy flow of it, and look under the sun on a bright, clear evening from four o'clock till sunset. Don't get where there is timber lest you think it falls from the trees. My

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are kept very busy—the result of the satisfaction we always give our customers.

HAVE

you had our Catalog yet? If not, you had better get it. Sending out Catalogs never

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Untested, 50 cents each; $6.00 per dozen. Safe arrival and reasonable satisfaction.

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Langstroth Hives and everything pertaining to same.

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MRS. ANNIE MUTH (Widow.)
Cincinnati, Ohio, April 7, 1899. 15Atf

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Has no Sag in Brood-Frames.

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Has no Fishbone in the Surplus Honey.
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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

Bees FOR SALE

Write me soon.

20Atf H. LATHROP, BROWNTOWN, WIS.
Please mention Bee Journal when writing.

bees gather it and I have no more trouble selling it than I do what they gather from flowers.

Now a word about "bug-juice": Has any man taken pains to see which comes first, the bugs or the juice? We see them on sprouts and we see juice also, and if I am not laboring under a great mistake the bugs are only scavengers. I have had two seasons' observation and the bugs were second both seasons. Now I will explain how it was:

There are cherry and plum sprouts growing right in my bee-yard, and when a sprout is very thrifty I see on the tender taps, from six to eight inches down, that a sticky substance exudes from both stem and leaf on the top and bottom, and I have tasted it, and it was sweet, like honey. There was not a living thing on it, but in two or three days I would see some small insects on it, and in three or four more days the whole of the stem and all the underside of the leaf would be black with them.

W. T. ALEXANDER.

Ozark Co., Mo., May 10.

Safe In-Doors—Loss Out-Doors.

Bees wintered in the cellar with but little loss, and are in good condition now. Those left out-doors are all dead.

J. N. SHEDENHELM.

Iowa Co., Iowa, May 12.

Honey-Dew on Cotton—Swarming.

For some time now there have been several articles on honey-dew in this journal, and the same subject has been commented on during conventions.

I am living in the cotton-belt of Texas, on the edge of thousands of acres of post-oak and black-jack (a species of oak) scrub, and my bees are working hard on the bloom, which affords a great deal of pollen but no honey, or very little.

To counteract the lack of honey in the bloom, there is a little caterpillar about $\frac{3}{8}$ inch long, that feeds principally on the

The Midland Farmer

SEMI-MONTHLY).

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Mentionthis paper.

EVERGREENS

100, 6 to 8 in. $1; 12 to 18 in. $2.50. 100, 2 ft. $10 prepaid. 100, 4 to 6 ft. 25 varieties, $15. 45 choice Fruit trees, 20 varieties, $10. Ornamental & Fruit Trees. Catalogue and prices of 50 great bargain lots SENT FREE. Good Local Agents Wanted.

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An Excelsior Honey-Extractor, 3 frames, any size, almost new. Price, $7.00. Cost $14.00. Address,

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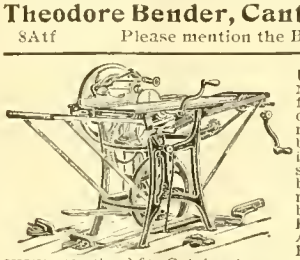

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If you are interested in Sheep in any way you cannot afford to be without the best and only Weekly Sheep Paper publisht in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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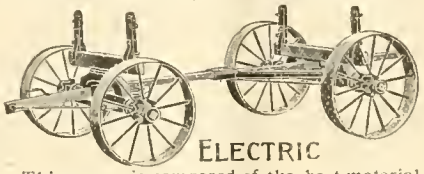
Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.



This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs.

These Electric Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low-down wagon at will. Write for Catalog of the full "Electric Line" to Electric Wheel Co., Box 16, Quincy, Ill.

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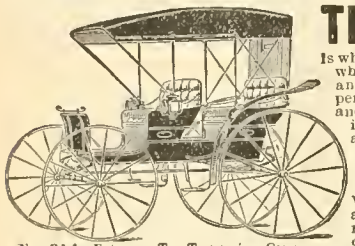

No. 314—Extension-Top Two-spring Carriage. Is complete with lamps, fenders, side curtains, storm apron and pole or shafts. Price, $63. Guaranteed as good in every way as others sell for $90.

Is what every man is naturally seeking. He should be doubly careful when it comes to the purchase of vehicles and harness. A man's life and that of his wife and family often depend upon quality in his buggy or carriage and harness. We give extraordinary quality for the money. Then there are the advantages of our plan of doing business.

WE HAVE NO AGENTS.

but sell all goods direct from our factory at wholesale prices.

We ship our goods anywhere for examination and guarantee everything. We make 170 styles of vehicles and 65 styles of harness. Don't buy any of these things until you get our large illustrated and descriptive catalogue. It's **FREE.**

No. 100—Double Buggy Harness. Full nickel trimmed, price $17, as good as retails for $25.

Elkhart Carriage & Harness Mfg. Co. W. B. Pratt, Sec'y, Elkhart, Ind.

20A13t

BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

We also manufacture **Tanks** of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

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OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

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Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

Please mention Bee Journal when writing.

leaves of the black-jack, and after it has run its appointed time, it webs itself up in one of the leaves. In eating, it starts generally on the edge, and wherever it cuts one of the laterals running from the midrib, there comes a drop of transparent liquid, about the size of a pin-head, which, if left for a day or two, gets as thick as good, ripe honey, is very sweet, and is more abundant after a good, heavy rain—say a week after. I have noticed this for the last two years. My bees suck this eagerly, and boil in and out of the hive in a way that makes me feel good, and tells me that swarming-time is near at hand.

Sometimes, during a damp spell, the cotton gets covered with vast numbers of aphis, and the upper side of the leaves will first get gummy, and then will even drip a kind of dirty-looking sweet fluid. If there is anything else on hand the bees here will not touch it. The same way with the cottonwood-tree, the leaves of which will get in the same condition. This will attract myriads of flies and wasps, but never a bee.

I have a queen that is four years old. I have had her two years. Last year she kept 16 Hoffman-frames full, but this year only 8. Now her daughter keeps 16 frames going. This is what I want to do: When mother and daughter swarm, cut out all but two of the best queen-cells from each hive, and then go to all the other hives, cut out every one of their queen-cells, and substitute two of these others, or my good ones.

Say mother and daughter are Nos. 1 and 2, respectively, No. 3 has swarmed about 10 days ago and is pretty short of bees, as I shook off a goodly number from the parent colony, and drove them in with the swarm on the old stand. Will it make much difference if I kill the young queen in No. 3 when either Nos. 1 or 2 swarm, and give them a cell or two with protectors?

W. H. ALDER.

Callahan Co., Tex., Apr. 27.

[The difference would depend altogether upon the length of time the substituted cell would be in getting a queen to lay after the other is removed. You can measure that pretty closely by the length of time between the swarming of No. 3 and No. 1. If they should swarm at the same time, there would be no loss of time by the change of cells. If No. 1 swarms 8 or 10 days after No. 3, then 8 or 10 days of laying will be lost.—C. C. MILLER.]

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.
H. H. HYDE, Asst. Sec. and Treas.
Hutto, Texas.

Van Deusen Thin Foundation.

We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

THE A. I. ROOT CO.,
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ADEL BEES

Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

HENRY ALLEY,
21A3t WENHAM, ESSEX CO., MASS.

Italian Bees and Queens

...FOR SALE...

Queens, $1.00 each. Bees by the pound, $1.00. Nuclei, two-frame, with Queen, $2.00; one-frame, $1.50; each additional frame, 50 cents. These are sent in light shipping-boxes, L. pattern frames.

MRS. A. A. SIMPSON.
19D4t SWARTS, Greene Co., PA.

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Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each, by mail,	$1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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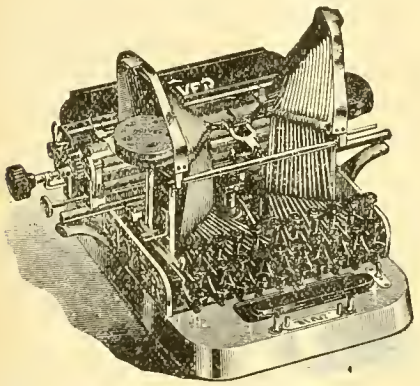
IT TOOK 25 YEARS to find out that typewriters have been built up-side-down. The OLIVER is built right-side up, where the WORK IS IN SIGHT.

THE OLIVER IS POPULAR because it is an up-to-date typewriter, not in the Trust, and because it SHOWS EVERY WORD AS YOU WRITE IT.



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and countless other houses of like importance and character.

Send for Catalog.... **Oliver Typewriter Company,** N. E. Cor. Washington and Dearborn Sts. CHICAGO, ILL.

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Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf **AUGUST WEISS, Hortonville, Wis.**

Please Mention the Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, May 8.—Not anything of consequence doing; a little honey is being sold at prices that have been prevailing for some time. White comb is scarce, but there is a surplus of dark. Extracted unchanged. Stocks light. Beeswax, 27c. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey. M. H. HUNT.

NEW YORK, May 9.—Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 55@60c per gallon. Beeswax quiet at from 26@28 cents, according to quality.

Our market is in first-class condition, being bare of extracted honey, and demand good. New crop is beginning to arrive from the South. Comb honey is well cleaned up; some demand for white but demand for dark has ceast. HILDRETH & SEGELKEN.

SAN FRANCISCO, May 3.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

In quotable values there are no changes to record. A ship clearing this week for Siberia took 231 small cases of extracted, being honey repackt by jobbers. There will be a fair yield this season in the San Joaquin, probably 150 cars, mostly alfalfa honey, but the production will be very light in the balance of the State.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@ 7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year. BLAKE, SCOTT & LEE.

KANSAS CITY, May 15.—No. 1 white comb, 15c; fancy amber, 14c; No. 1 amber, 13½c; fancy dark, 13c; No. 1 dark, 12c. White extracted, 6c; amber, 5½c; dark, 4@4½c. Beeswax, 25c. C. C. CLEMONS & Co.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & Co.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season. BATTERSON & Co.

OMAHA, May 18.—It is a hard matter just now to give quotations that would have any meaning at all. With the exception of small lots of buckwheat—very good for its kind, but it is not the kind wanted here, which dragged at 8@9 cents—there have been no new receipts, and there will not be a pound of honey carried over in dealers' hands. First receipts of new crop will certainly be pickt up eagerly at fancy figures. PEYCKE BROS.

Nuclei of Bees For Sale.

We have arranged with a bee-keeper in Lee Co., Ill., about 100 miles west of Chicago, Ill., to fill orders for 3-frame (Langstroth) Nuclei of Italian Bees, with Queens, in light shipping-boxes, at $2.75 each, or in lots of 5 Nuclei, with Queens, at $2.50 each. Address,

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

TERRAL BROS. Lampasas, Lamp. Co. Tex
18Atf Please mention the Bee Journal.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

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We make the New

Champion Chaff-Hive

with fence and plain sections, and a full line of other

SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

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Young Men and Women

It will pay you to fit yourselves for good positions by taking Shorthand by Mail. Send $1.60 for Text Book or 3 cents for catalog . . . . .

Eclectic Shorthand College,
518 Ashland Block, CHICAGO.

Headquarters of the Eclectic System.
39A1y Please mention the Bee Journal.

IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

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I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3: Extra Selected, for breeding, **the very best**, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t **Borodino, Onondaga Co., N. Y.**

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.

Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog. Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation exclusively:

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E. Kretchmer ..... Red Oak, Iowa.	G. W. Fassett ..... Middlebury, Vt.
J. M. Jenkins ..... Wetumpka, Ala.	J. W. Bittenbender ..... Knoxville, Iowa.
Portland Seed Co. ..... Portland, Oregon.	J. L. Gray ..... St. Cloud, Minn.
E. T. Abbott, ... St. Joseph, Mo.	Pierce Seed and Produce Co. ..... Pueblo, Colo.
L. C. Woodman ..... Grand Rapids, Mich.	F. Foulger & Sons ..... Ogden, Utah.
J. Nysewander ..... Des Moines Iowa	R. H. Schmidt & Co. ..... Sheboygan, Wis.
Inter-State Mfg. Co. ..... Hudson, Wis.	Vickery Bros. ..... Evansville, Ind.
Reynolds Elevator Co. ..... Poughkeepsie, N. Y.	C. H. W. Weber ..... Cincinnati, Ohio.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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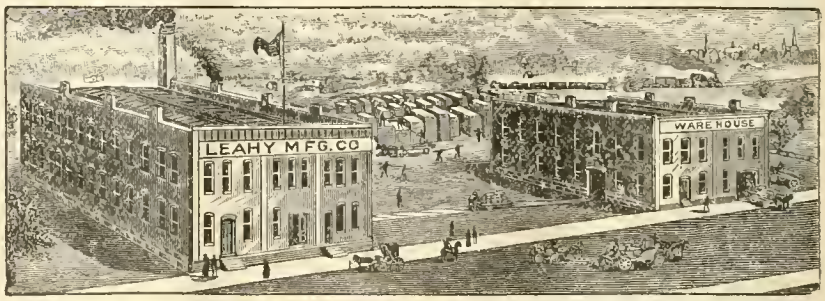

For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo. 1730 S. 13th St., Omaha, Neb. 404 Broadway, E. St. Louis, Ill.

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Mr. Eastern Bee-Keeper,

Now is the time you want FOUNDATION AND SECTIONS in a rush. We usually fill orders within 24 hours of the time received. If you want your SUPPLIES shipped at once, send here.

SQUARE TIN CANS

For Extracted Honey, two 5-gallon cans in a case, 10 cases, $5.00. Discount on a quantity.

Italian Queens and Bees in Season.

Our Catalog describes all, and we mail it free.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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25 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 25 cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JUNE 1, 1899. No. 22.

Seventeen Prominent Canadian Bee-Keepers.

(See page 345.)

(From the Canadian Bee Journal.)

W. E. Young. G. E. Robinson. W. J. Craig. C. Edmonston. Editor R. F. Holtermann. D. W. Heise. J. R. Fleming. C. Spencer, B.S.A. R. W. Roach. F. J. Miller.
Jas. Shaver. Alex. Taylor. F. A. Gemmill. Jacob Alpaugh. L. Vansickle. Jas. Armstrong. Wm. Atkinson.

CONTRIBUTED ARTICLES

Bees and Fruits—The Facts in the Case.

BY PROF. A. J. COOK.

AS conductor of Farmers' Institutes for Southern California, I have a good opportunity to feel of the public pulse regarding bees, and I have been more than gratified at the general right-mindedness of all parties interested. As a region where all kinds and the most luscious fruits are raised, and where extensive fruit-drying is carried on, it goes without saying that bees will of necessity be more or less of an annoyance at certain seasons in certain years. When we couple with the above facts that of the general presence of bees, and often in immense numbers, we readily see that the question of bees and fruits becomes one of great importance.

The last week in March and the first week in April I held institutes in four regions where fruit-growing is the leading industry, and where bees are kept in great numbers. These meetings were attended by hardly less than 2,000 people in the aggregate. In two of the places—Villa Park and Banning—lawsuits have been recently instituted between orchardists and apiarists. The fact that I was requested to give the true status of the relation of bees to fruit, shows clearly that the people for the most part wish to know the truth. I gave as below the facts as I see them, and was more than pleased to note that few took objection to my position; indeed, only one man called in question my statements, and he did so in private, and not in hostile mien. I am very sure that Southern California will very soon be in the same attitude as the people of France, Italy and England, and will wish the bees brought to the orchards, and not cry for their removal. Already the orchardists in most localities are converted to the right belief.

The following is the position I took in the premises:

It is a truth demonstrated beyond question, by Darwin, and by many other scientists, by our Department of Agriculture, and by my own experiments, that many flowers are sterile to their own pollen, or to that of the same variety of fruit. It is also true that pollination is always necessary to seed-production, and usually to the production of the pulp in case of our berries, pomes, drupaceous fruits, etc. There seems as little doubt but that some fruits usually or sometimes fertile to their own pollen, or to that of the same variety, are under less favorable circumstances sterile to the same. Thus, the Bartlett pear is generally sterile to Bartlett pollen, tho occasionally under favorable circumstances it fruits well tho no other pears are in the vicinity. Yet in these exceptional cases no one knows when the tide will turn, and the Bartlett fail to produce unless other pears are hard by to insure cross-pollination. We are sure, then, that mixing of fruits so as to secure cross-pollination is absolutely essential in almost all cases, to the best success, and in a large proportion of cases to any success at all.

Again, this cross-pollinating requires insects to carry the pollen-grains from the anther of one bloom to the stigma of another. Before the orchards were planted the fruits were less numerous, and the solitary scant-insects were sufficient to do the work; but as we mast the fruits in great orchards, the native solitary insects were all too few, and fortunately the social bees were brought along with the fruits. Even the social native insects, like social wasps and bumble-bees, are very few in spring when the fruits bloom, and so are absolutely inadequate to pollinate our orchard trees. The non-seeding of red clover for the early first crop is because the bumble-bees are too few to properly cross-pollinate the bloom. It is possible that in this case the flowers are fertile to the pollen of other red-clover blossoms but not to their own.

The orchardist then must have the bees. To drive them away would be to kill the goose that lays the golden egg.

Again, bees never attack sound fruit. They only come when bird, wasp, or sultry weather combined with overripeness break the rind and cause the juice to exude. Possibly bees could bite open the skin of the fruit, but positively they never do. Yet let the juice once ooze, and then the bees quickly hie to tree or drying-tray and leave little behind to show what once was there.

When we remember that nearly 90 percent of the ripe fruit is juice, and that the bees take this, we see that little would be left. The juice often oozes from very ripe fruit, and so bees are often in the vineyard to the great annoyance of those who would gather in the vintage. Fruit on the trays in the drying-yard has the skin removed, or is cut open, and so the bees may take most of it unless repelled by sulphuring, which is now generally done. We see, then, that bees are a disturbance at times, and annoy the orchardist greatly. Then must the apiarist be driven off? Not so, say the European pomologists. They want the bees, and there is no quarrel between the two industries. Not so, say the most intelligent fruit-men of our own State and country, for we must have the bees to aid us in time of bloom.

What then? It may be wise to move the bees temporarily on rare occasions when the annoyance is most severe. If so, who should bear the expense? Surely, not the bee-keeper, for he was the pioneer in the region, and has a first, or at least an equal, right. The removal is for the fruit-man, and he should be at the most, if not all, of the expense. But each should know all the facts, that bees are never harmful to flowers, but always necessary to best success, and that they are only injurious to wounded fruit; that if they are to be temporarily removed it is for the good of the fruit-man, and he should bear the expense. The harm is usually not great, and the annoyance usually almost nothing, so that if the bee-men and fruit-men donate the one to the other their choicest products, and cultivate good-feeling and not emnity, each may be a tremendous blessing to the other, and all the best of neighbors.

Los Angeles Co., Calif.

Advantages of Docility in Queen-Bees.

BY W. W. M'NEAL.

JUDGING from the superior excellence of a queen reared to supersede the old one, I am led to believe that to further domesticate our bees, all queens should be brought up in accordance with conditions as therein found. At such times the desire of the whole colony is in the interests of the home they have. The nurse-bees are not intoxicated with that wild dissipation which culminates in swarming, and which comes from a knowledge of the purpose queens are reared during the flush of the honey season.

To take away the reigning queen when the colony is enjoying a flourishing situation, in the hope of securing a number of young queens, and then expect the mother-bee to duplicate herself in these, it seems to me, is entirely wrong. The colony is thrown into a state of intense excitement and worry, if not frenzy, and more especially is this the case if the bees are blacks or hybrids, the kind so frequently chosen for cell-builders. Now, surely, the nurse-bees will not, cannot at such times, furnish nourishment that will develop a queen-bee possessing the most steady and pleasing temperament. If queens so reared are allowed to receive their first impressions from angry, loose-footed bees, or bees madly bent on swarming, it would very materially affect their good behavior, and the tie that binds them to home and its sweetness.

I believe it advisable, even when rearing queens in colonies having a laying queen, to remove the combs on which the cells are built to the nursery as soon as they are capt. Then when the queens emerge from the cells their first lesson will be at the hands of the apiarist. I have retained young queens in cages containing honey and comb, away from any but very young worker-bees, and permitted them to take their first flight from my hand or coat-sleeve. They would return, barring calamities that sometimes overtake them while in the air.

If they are handled gently, never blowing smoke or one's breath on them, their action soon contrasts largely with that of virgin queens which have remained in the hive. I see no reason, if one chooses to take the pains, why the mating of queens could not be secured before giving them back to the hive-bees at all. Those large, supersedure queens, when fully developt and on the combs, behave as if they had a realizing sense of being in their proper element, and were fully entitled to protection and respect. Not only are we to expect strong, gentle workers from gentle queens, but more uniform success in introducing them into strange colonies of bees. Any one who has had experience knows that much depends upon the queen being cool-headed and quiet at such times; and in any colony of bees they are much less liable to be balled when it is necessary to manipulate the combs.

Scioto Co., Ohio.

Some Observations on Queen-Rearing.

BY HENRY BOSWORTH.

I AM one of those who believe that we should improve upon Nature in whatever line we may be engaged; and just how is the best way to accomplish this object, is the great secret of success. It has been my good fortune to be engaged in apiculture nearly all my life, and while the occupation has been fairly remunerative, it is not from this cause alone that I have continued in the business.

I am very much interested in the study of the operations of the honey-bee in all its phases, and particularly in queen-rearing, in which I have had some experience, and will give a glimpse of the result of my observations.

First, the colony to do the work should be strong in bees, and, I think, the stronger the better; if not so naturally, it should be made so by feeding, or by supplying bees from some other colony. Many talk about the *swarming impulse*, but I prefer the *business impulse;* and if there is not honey enough coming in to make this impulse, you must secure it by means of feed.

When you have the colony in the right condition, make it queenless, and let it form queen-cells; let it remain in this condition until the larvæ are too old to rear queens from; then overhaul and destroy all queen-cells, which will put the colony in the right condition to rear queens from eggs that you may supply. To obtain the eggs for this purpose, I place an empty comb or two, or more if desired, in the center of the brood-chamber of my best breeding queens two or three days before I wish to use them in the prepared colony. When the queens are all started from the egg, they will all hatch about the same time, and you may expect that they will be ready to cut in about 14 days; or you might wait a little longer.

I now divide the colony into which the combs with eggs have been introduced, into nuclei—one or two frames each—and insert one of these newly-formed queen-cells in each nucleus. If there are enough cells to supply the demand, I make the nuclei but one frame each; and if there are more cells than frames, which is often the case, take frames of comb and brood from other hives. Make the nuclei in the afternoon; shut the bees in until the next morning, then liberate them, and but few will go back to the old hive. I want brood in each nucleus, and before the queens are ready to take their "wedding flight," they should be supplied with unsealed larvæ. Geauga Co., Ohio.

When to Put Supers on the Hives.

BY C. P. DADANT.

A BEGINNER inquires as to the best time to put on the supers, and how he can ascertain what colonies are likely to need them, as he has been told that it is a mistake to put supers on a hive when the bees are unlikely to be able to put honey in them.

The time to put on supers, whether for extracting or for comb honey, is just before the beginning of the real harvest or at its very inception. When the harvest is about to begin, or is beginning, the least delay is injurious, as the possible lack of room may cause preparations for swarming on the part of the strongest colonies, and it must be borne in mind that these colonies are the ones upon which we should depend for the best of the crop.

In this, and other States near us, it is of no use to expect a flow of honey sufficient for surplus before the blooming of the white clover. There are exceptional cases in which the fruit-bloom has produced a surplus, but I believe that, if such cases could all be reported, we could still count them on the fingers, every year, in Illinois. So it is to little purpose to worry about getting ready for the crop until the white clover gets into pretty full bloom and the weather is satisfactory. I have seen—and so have probably a number of our readers, among those who have had practical experience—I have seen the bees starving, actually throwing out their brood, early in June, while the pastures and meadows were turning white with the abundance of the bloom, just because of a few cold, rainy days. The hives being very populous, and having a great deal of brood in all stages, and a great many young bees hatching daily, the consumption of stores is rapid, and a bad turn in the weather makes it imperious on the apiarist to closely watch his colonies. Even with a plentiful bloom and seemingly fair weather for honey, there is sometimes such delay in the crop as to disappoint the eager bee-keeper. The causes of a production of honey in the calyx of the flowers are a mystery to us all, so we are still unable to ascertain, otherwise than by an ocular examination of the hive, whether the bees are getting much of a surplus.

The first signs of a beginning of the crop are detected by the whitening of the combs by the bees. The harvesting of a little honey prompts them to repair the combs that have been cut down by the unsealing of the cells that contained the previous crop, and they hasten to repair these and add fresh wax to them, just as soon as they feel that there is enough surplus produced to justify them in using a part of it in that way. Even the blackest and oldest combs are usually refreshened, and at the first signs of this evident encouragement one should lose no time in putting on supers on all hives that show it. The fresh honey itself might be detected even a day or two sooner if the combs are lifted out, for it drips out just like water, being thin and unripe.

We would put extracting-supers on every colony that shows whitened combs, but the comb-honey supers ought to be withheld from such colonies as have not yet filled all their combs with brood, unless such combs be removed and the space be reduced with a dummy or division-board; in which case the space over the brood may be supplied with supers.

When we run for extracted honey it matters but little whether the bees still have room in their brood-chamber when we put on the supers. Unless the weather is cool, and the space added is entirely too extensive, there is no drawback to the supplying of the hive with a liberal amount of empty combs. With large hives and populous colonies in very bright seasons, we have placed on two supers at one time, giving room for 120 pounds at one time to the best colonies. It is a fact that a very populous colony, in exceptionally good seasons, can fill two supers in an incredibly short time. In 1884 we had colonies with three tiers of supers which were emptied and again filled five times over. This was from the fall crop. In the season of 1889 we extracted three times, during the clover bloom, from a number of colonies that were supplied with three supers.

When running for comb honey, if the supers are put on a hive which has unfilled combs below, we need not look for any surplus until those combs are all filled. Such colonies would better be used for increase. It is our method to take the honey crop from the strongest colonies, and obtain our increase, whenever any is wanted, from the colonies that cannot be expected to yield any surplus. This will be the subject of another article. Hancock Co., Ill.

Keeping Down the Swarming-Fever.

BY MRS. L. C. AXTELL.

PUTTING on sections early seems to keep the swarming-fever down more than anything else we ever tried. Put them on as soon as it can be done without chilling the brood and retarding brood-rearing. One year, when we had not kept bees many years, we put on the supers, but gave only a few sections in each super, intending to put them on as soon as was needed, but the bees became crowded suddenly, and swarming was fearful; they swarmed over and over again—no time to get the supers filled, so many swarms to care for. So we have learned also to have supers all filled, for a super can as easily be put on as only a one-pound section.

Large entrances in hot weather are a help to keep down swarming, and to keep bees working right along in the supers. With our hive we often (if the hive is in the sun) take down the front side of the hive, or the east side, leaving up the division-board that is at the side of the combs, and is raised from the bottom-board the height that the brood-frames are raised, as we use the Quinby style of hive, and the frames rest on the bottom-board.

Also, we think that bees swarm worse with the use of separators than without, and so we have not used separators for a number of years. Some of the combs are not quite so straight and even, but we have no trouble to sell all the honey we can produce. The greatest trouble, of late years, is that they don't store honey as they formerly did. Every year we hope for the better.

AN EXPERIENCE IN HAULING HONEY.

Some years ago a young man helping us with bees went over to our out-apiary and extracted about two-thirds of a barrel or so of honey. He laid the barrel on its side in a wagon, and wedged it up so he thought it would not turn over and roll about. As it was late he drove pretty fast, and when he got half way home a man called to him and

wanted to know what he had in his wagon. His first thought, the young man said, was to answer back it was none of his business, and drive on, but he answered, "It is honey," and the stranger told him it must be spilling out. The young man lookt back, and there the barrel had turned partly over, and was pouring the honey out of the bung-hole into the wagon-bed among the straw, and it was leaking in a stream thru the wagon-bed. He saved some of it, what he could, in pails he had along for feeding-back, and righted up the barrel, as it was not quite all spilled out.

Warren Co., Ill.

Planting for Honey—The Clovers.

BY F. A. SNELL.

AT the close of fruit-bloom, at latest, the surplus receptacles should be in readiness for the crop of surplus honey which will usually come in with the opening of the white and Alsike clovers. Bee-keepers should see to it that all available space along roadsides and fence-corners is occupied with white, Alsike or sweet clover. Our pastures for stock should be well seeded with white or Alsike clover, or a mixture of these seeds. The pasture thus afforded gives an abundant amount of food, and that of the very finest quality for cattle, sheep or hogs. For the dairy it is an establisht fact, as it has been fully demonstrated, that a greater amount of milk will be secured from pasture of either white or Alsike than from red clover.

In an experience dating back into the 60's, I have tested and observed quite closely as to the Alsike. My first pound of Alsike clover seed was bought in 1867, at a cost of one dollar. The seed was sown, and the little plat was a mass of bloom the following season, and I was much delighted with the plat, its beauty and utility. The bloom was covered with bees to an extent I have never seen surpast anywhere or any time. From this early planting I have handled this clover as pasture and hay, up to the present time, or 31 years.

I may mention right here that in pasturing upon either white or Alsike clover, I have never known any trouble from cattle bloating, as is often the case when pasturing on red clover. The hay from Alsike clover is of the finest quality, and is relisht by all stock. The stalks are fine, and not woody like red clover hay, so it is all eaten. This clover may be grown alone for seed or food, or sown with timothy; when with timothy the latter prevents the clover from lodging to quite an extent. In good seasons I have harvested three good loads of Alsike hay per acre. This clover seeds at first blooming, and yields well in seed, which usually brings a good price. As honey-plants the white and Alsike clovers are unsurpast, and every farmer bee-keeper should grow all that can be used to advantage on his farm.

There cannot be too much done to give us a full bloom for our bees; with the bloom secured, good crops of honey may be had, but if we are negligent we hardly deserve such.

If the Alsike is mown when just out in bloom, it will bloom later in the season, and thus prolong the honey-flow, which might be desirable when the white clover bloom is profuse earlier. The Alsike is very hardy, and will winter well when red clover is killed out almost wholly. I have never known the Alsike to winter kill in the 31 years that I have had experience with it, which is quite the opposite to red clover, as any one of experience knows. Bee-owners can and should induce their neighbors to grow this useful plant.

In many localities white and Alsike clover bloom is the only source from which a surplus honey crop is secured, and too much effort cannot be made to secure their growth. The fertility of the land is improved by the growing of clover, which is also of importance to the farmer. The basswood bloom, where that tree is grown, follows that of the clovers, or comes in before the clover bloom ends—in our latitude, from June 25 to July 5.

Of all the honey-producing trees we have, the basswood takes the lead. When conditions are favorable the yield from its bloom is immense. The honey this tree affords is in quality not equaled, according to my taste, by any other tree or plant. The planting out of the basswood tree along streets, highways, and in groves on our farms, has been sadly neglected. It is high time that all bee-keepers who can do so should be doing this work. Our groves are disappearing at a sad rate, and if nothing is done in this direction soon, many of us who have in the past secured good crops of this fine honey will have none at all, which means a good deal, as in some seasons it has been our early bloom that gave a surplus. By early is meant during our summer season, in this case.

Sweet clover is an important honey and pollen producing plant, and is well worthy of culture. There are hundreds of acres in every township where worthless weeds now grow, that could be sown to sweet clover, and be of much value to apiarists at least. The farmer bee-keeper would be well rewarded by sowing this for his bees and stock. When stock are turned on it to pasture when young it is fed down and thus kept tender and sweet for the entire season. Were enough sweet clover grown near an apiary the crop of surplus honey from this source would, with good weather at blooming time, pay a nice profit. With us not very much is grown, but it helps to keep up brood-rearing. In some localities it is quite extensively grown, and good crops of honey realized. All who can do so should extend their planting of the sweet clover.

Carroll Co., Ill.

Italian Bees' Honey vs. that of the Blacks—Bee-Pasturage.

BY G. H. ALLEN.

I WAS greatly amused when I read Mr. Bates' article, on page 19, on "Why Italian Bees Store Better Honey than the Blacks," and more so when "Stenog," in Gleanings, went so far as to say that it is pretty hard to prove he (Mr. Bates) is wrong, and follows with a long train of reasons. However, I think Cogitator, on page 82, gives the article about its right weight when he admits that Mr. Bates has made some headway, but concludes by saying, "Now, if some one will tell us why black bees store better honey than the Italians—why, then we'll have a mitten on each hand." Now, I am not going to put that mitten on the other hand, but just want to have my say from a practical stand-point, and leave the theory to Mr. Bates and "Stenog."

I commenced to keep bees in 1890, all blacks. In 1891 I introduced Italian blood, and since then I have had blacks, Italians, and almost all grades of hybrids, with a sprinkle of Carniolan blood. Now when the honey is capt over before extracting there is no difference in the honey of either strain or mixture. I have never succeeded in getting pure Italians to finish up comb honey equal to the blacks, in color. The Carniolans were fully up to the blacks, and usually high-grade hybrids do first-class work.

EXPERIENCE WITH HONEY-PLANTS.

But there are other questions which interest me more than the above, which are discust in the "Old Reliable" from time to time, and none more so than pasturage. I will give my experience with a few of the leading honey-plants. I have tried crimson clover for three seasons, and for this section it is a success, and coming just after fruit-bloom it has proven a great boon to my bees. I practice sowing in corn at the last cultivation, or with buckwheat. I prefer to have it sowed from June 20 to July 1, as it is not so liable to winter-kill sown this early; but I have sown as late as Aug. 15, with a good stand the following spring.

Sweet clover yields abundantly here, but grows successfully only on rich land. (I am just out of the lime-stone belt.) I find the seed propagates best when sown during the winter, and when thus sown it will hold its own in all waste places, provided the ground is rich. Italian and sweet clover I have made pay from a dollar-and-cent point of view.

I have realized considerable satisfaction in experimenting with a few other honey-plants. Alfalfa is a failure here, growing luxuriantly until commencing to bloom, when it turns yellow and dies; if cut, it will start up green again.

Spider-plant yields abundantly if the weather is just right, but the care in raising will outweigh the profits.

I failed to mention Alsike in the above, for aside from its honey I would not think of discarding it, for here in mixtures with other grasses it is fully equal to the red, while as a honey-plant it has no equal in this section, except cottonweed, which here exceeds linden in the amount of nectar secreted, when linden is at its best, and is a much more certain yielder, with a longer period of blooming. I have wondered why it is not more spoken of as a honey-plant; probably it does not yield in all sections as it does here.

Pleurisy-root yields scantily here, while Mr. Heddon prizes it highly as a honey-plant.

Monroe Co., W. Va.

Foul-Brood Germs—Spores and Bacilli.

BY THOS. WM. COWAN.

I HAVE read the correspondence respecting the destruction of foul-brood germs contained in honey, by means of boiling, and it appears to me that, when giving advice with respect to such a destructive enemy as foul brood, we cannot be too cautious, and had better err on the side of safety than the reverse.

From the promiscuous manner in which many talk about microbes, bacilli, spores, or germs, it is quite evident that they do not realize that a very great difference exists between them; and conditions that will be destructive of the one may not have the slightest effect on the others. In respect to the particular organism with which we have to deal in foul brood; viz., *Bacillus alvei*, we have to contend with it in two different forms and stages of life, in one of which the vitality of the organism is easily destroyed; while in the other the same organism, but under a different form, is capable of retaining life, and germinating into the condition of the previous stage, even after what would appear the most damaging influences, such as long lapse of time, drying, heat, cold, and chemical re-agents. The bacillus condition is the first stage of active life of this organism; and it remains in this state, splitting and multiplying as long as it has nutrient material to live upon, and other conditions are favorable. A bacillus is rod-shaped, and when, in process of time, it has attained full growth, it splits in two, each of these taking up an independent existence, and going thru the same process; and as it has been shown that as many as two generations can be reared within an hour, and as the same rate of progression can be kept up by each individual in suitable nutrient media it is not astonishing that foul brood spreads rapidly.

Now, while in this bacillus stage it is not difficult to kill the organism (a temperature under 160 degrees Fahr. will do it), and there are a number of chemical re-agents which even in great dilution will destroy bacilli. It is, however, very different in the subsequent stage of existence of this microbe. When the bacilli, or rods, have multiplied to such an extent as to exhaust all the nutriment upon which they were feeding, or come in contact with surroundings inimical to their active existence, the rods gradually turn into spores. At a certain point of the rod a bright speck appears, which gradually enlarges at the expense of the protoplasm in the rod, until in its fully developt state it assumes an oval shape. The sheath swells, and the bacillus looks much thickened; then the sheath breaks, and the spore becomes free.

Now it is when the rods have become spores that the danger arises, because it is very difficult to make many understand the great difference between them and bacilli. They are analogous to seeds of plants, altho they differ from these in possessing greater vitality. Spores retain the power to germinate into bacilli after the lapse of long periods; and Dr. Klein, one of our great authorities, says, "There is no reason to assume that these periods have any limit." We have, at any rate, had ample evidence in our own experience to show that spores have retained their vitality for many years. These spores are not only capable of germinating into bacilli after a long period of time, but will endure heat, cold, drying and chemical re-agents influences that would be destructive to bacilli themselves. The temperature of boiling water does not destroy them unless considerably prolonged, altho a very much lower temperature, as I have already stated, will kill bacilli. If we had to do with bacilli only, in every case bringing up the temperature to 212 degrees Fahr. would be amply sufficient; but with spores it is different. A few minutes boiling will destroy some, because all the spores have not the same degree of vitality; and in this they resemble seeds of plants. It is well known that some seeds will germinate much sooner than others, and some will not germinate at all.

Experiment has shown that, to destroy all the spores, prolonged boiling is necessary, or they must be subjected to a higher temperature, such as is obtained from steam under pressure. Spores are unable to withstand steam, even for a few minutes, at a temperature of 212 degrees Fahr.; but this could not be applied to honey, as the spores would have to be separated before they could be acted upon by the steam.

I have had frequent demonstrations that many do not really understand what boiling, from a scientist's point of view, is, and that is why the results are frequently so different. They are content to think that the liquid is boiling if they see it bubbling, whereas the bulk of it may be several degrees below the boiling-point if stirred and thoroly mixt, and, of course, the larger the quantity the longer it takes to raise the whole mass to the boiling temperature. Experience has shown that it is not safe in every case to depend upon 10 or 15 minutes' boiling. Several boilings would be better, but not so convenient to the ordinary bee-keeper. The rationale of this is that, at the first boiling all the developt bacilli are destroyed; then suppose a nutrient medium and other favorable conditions to exist in the honey, the unaffected spores would germinate into bacilli, and could be destroyed in the next boiling. A third and even a fourth boiling might be necessary to destroy the remainder. Failing this method of procedure it is safer, with our present knowledge of the behavior of spores, and taking into consideration the appliances at the command of the average bee-keeper, to insist on prolonged boiling.—Gleanings. April 18, 1899.

Report of the Chicago Bee-Keepers' Convention.

BY HERMAN F. MOORE.

[Continued from page 291.]

Mr. H. S. Jones, of this (Cook) County, followed with another paper on the same subject as that of Dr. Mason, viz:

How I Handle My Bees in the Spring.

To begin with, they get little handling by me in early spring. No doubt it was intended that I should give my experience in managing my bees in *early* spring. I must start from the close of winter, then if you will follow me thru until spring you will have my whole management.

In the first place, I must describe the hive I use. I make all my hives by hand, buying the lumber in boards, and make it complete from bottom to cover. My hives are all double-wall, without any air-space between, and painted on the outside. You will no doubt ask why I make a hive thus. Because the moisture from the bees is taken up by the inside board; the outside board being painted, warms the inside quickly; the inside board being connected to the outside by direct connection conveys the heat to the inside much quicker.

I winter my bees on the summer stands without any protection, such as fence, etc., until along in January, when I commence to shelter and start the spring managing. On sunny days I open every hive, loosening the packing, which is excelsior, so that the sun goes direct into the super. I watch the sun very closely, in case it should cloud up.

The hives are at once packt and covers put on. This is continued until along in April, according to the weather. Now it is time to examine all colonies, and give them clean houses. We all want clean houses in springtime, so do the bees. I have several new hives on hand, dried and painted. Starting at one end of a row I take out the frames and note their condition, jot it down in my book, opposite the number of the hive. At a glance I know just the condition of that hive; if short of stores I can give sealed or unsealed honey, as the case may demand, and pack them good and warm.

Why should not bees treated thus give good returns for trouble taken? I always give where needed new worker-comb; this will insure larger and stronger bees. Mr. York, when at my apiary last year, noticed how large my bees were. That is the way I got them.

Sometimes I spread the brood, but not unless it will stand it. I do not advise spreading except under very favorable signs; sometimes I stimulate by feeding honey. Bee-keepers should have enough extra combs on hand for times of need.

As soon as possible after the middle of April I replace all old queens with young ones. In this way there is no loss of time, and the bees are not so liable to swarm. I keep very close watch of all colonies to see that their little wants are supplied promptly.

The extra-strong colonies I divide early in May, giving one-half a young queen, and nurse them along until basswood bloom or sweet clover, when they are ready for busi-

ness. I give my bees more care during the early spring than at any other time of the year, because this is the time they need more. and in doing this I am looking after my own interests.

In the first three months of winter there is always plenty of bees in a colony prepared for winter, and as the winter advances they get less in number; after the first of the year they will not be so strong, therefore they need more protection, and some shelter, which must be given if wintered out-of-doors. I take out the packing, according to the weather, until it is all taken out. Then they are ready for supers. I remove the Hill's device and take a good, sharp scraper and scrape all propolis from the tops of the frames. Now the bees are ready for the harvest.

Cook Co., Ill. H. S. JONES.

Mr. J. T. Hammersmark then opened the discussion in an interesting manner as follows :

How I Handle My Bees in Early Spring.

Because I am interested in the bee-cause, and not believing in simply being a drone in the hive of bee-keepers, but rather a worker, therefore have I accepted the invitation to write an essay on the subject.

In our line of business we all know, or at least we all should know, that to set certain dates for the accomplishment of certain duties about the apiary is an impossibility, for the reason that our work must be done when the weather is suitable, and when the bees can fly. The first thing that I should do with my bees in early spring would be to assist them to clean up their house, no matter whether they were wintered indoors or on the summer stands. During the winter months the older bees die off, and if they do not become clogged up between the combs in their descent, they fall to the bottom-board, which, by the time spring comes around, generally becomes thickly covered with these dead bees. Bees also sometimes die in patches on the comb, caused by their leaving the main cluster on some mild day. But the weather suddenly turns very cold, and they cannot get back to the main cluster where they can keep warm, and are therefore soon chilled thru and die. These and all dead bees should be brusht off the combs, and the cemetery below them should be removed and a clean, fresh bottom-board put in its place. All this is a great help to the colony, and it seems to appreciate this help, for one so treated will build up strong in numbers very much faster than one not so treated.

I would now, should I find a weak colony unite it with a stronger one, so that the two would make one good colony. Feeding the bees with sugar syrup, or, better still, full or partly full combs of honey, is also now in order, for we must see to it that there is plenty of honey in the hive so that the bees shall not be saving of food, and thereby limit the queen in her work of egg-laying, for she must eat plentifully in order to lay eggs profusely. Then the larvæ also have to be fed, and the bees themselves have to live, so you see it is very important to have plenty of honey in the hive all the time.

If any colonies are found to be queenless at this early investigation, they should be given a queen, or a comb containing brood and eggs from another colony, from which they can rear a queen. A sharp lookout should be kept on these queenless colonies, as they are liable to be robbed at any time now.

I do not believe it pays to try to build up weak colonies the first thing in the spring, but unite them, and in a short time you can divide them to advantage, if you desire to increase your stock of bees.

In April, when the state of the weather permits, I would cut out all surplus drone-comb. We can leave this work until a later period, but see what our neglect will cost. The queen wastes her time and energy in laying these eggs; the bees waste their time and your honey in nursing and caring for these big, worthless babies. But this is not all, for you must have a hand in this matter also, and cut out this mussy mass of worthlessness if you want the best results in honey. Had I a colony whose population had become so decreast during the winter confinement as to be able to care for say only four combs, I would take the surplus combs away and follow up these four combs with a division-board, for by this change they could keep much warmer, which would also induce the queen to more vigorous egg-laying. When needed, these surplus combs should be given back, one or two at a time, moving the division-board back each time until their regular set of combs are returned, then the division-board should be removed from the hive.

Water placed about in the yard in small wooden tubs with some sort of a float in them to save the bees from drowning in the water is, I believe, of great importance, for on cold days when the bees can barely fly, they can get their supply at home without flying away to find a drinking place. Also, to supply them with rye-flour before they can gather pollen is of some use. But I do not think this is as necessary as the water question. The entrance of the hive I would keep contracted down to an inch or two, as this will help to retain the heat which is of so much value just now. When the weather becomes warm and settled, then these blocks or sticks should be removed, and full entrance be allowed.

As the topic of this essay calls for *early* spring management, I shall not proceed any further, but will leave you right at this point to finish the season yourself. To the bee-keeper, what I have said is old, and experience that he should have gone thru; but if the novice or any one else shall derive any benefit from this paper, I shall not consider it work in vain. A great deal more could be said on this subject, still if what has been read in your hearing is followed out in deed, you are on the right road for strong colonies by the first of June, and all ready, so far as bees are concerned, for the big honey crop in 1899—if it comes.

Cook Co., Ill. J. T. HAMMERSMARK.

A general discussion of the topic followed, by Dr. Peiro, Dr. Miller, C. Beers. H. M. Arnd, Mrs. Stow, Mr. Hogge, and others.

The next number was a bee-song by Ferdinand Moore, the little son of the secretary, which was well received and applauded.

[Concluded next week.]

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Splints for Stiffening Foundation.

Where can I get, or how can I make, the splints for stiffening foundation in the frames? MINNESOTA.

ANSWER.—I got mine from the A. I. Root Co., but any manufacturing establishment that has machinery for slicing separators can make them. The ordinary wood separators are cut into the proper length, the thickness being 1-16 inch, then a bunch of them can be sliced into 1-16 splints. The first I used I sliced out of separators with a pocket-knife, but that's a slow way.

Fastening Foundation in Frames.

DR. MILLER :—I see in Gleanings for Dec. 15 an article about sticks in frames for fastening the foundation. 1. Please let me know the size. 2. Will these answer for extracting without any wire in frame? 3. In speaking of the engraving under No. 1, "half bottom not yet nailed on," does this mean that there are holes in top and bottom bars for insertion of the sticks? 4. How are the sticks imbedded in the foundation? 5. Which foundation, "medium or light," is best? W. C. MYER.

1. The length is ⅛ inch less than the inside measure from top to bottom bar, and the sticks are 1-16 inch square. The reason for having the sticks ⅛ inch shorter than the space between top and bottom bar is that it is easier to handle the shorter sticks in putting them in; and, besides, basswood (of which timber the sticks are made) increases in length as well as thickness when it swells, and when the wood is thrown into boiling wax I think it likely that it increases in length.

2. Yes. I extracted about 300 pounds from such combs

that had been built the same summer, and there was no trouble.

3. No. The sticks do not necessarily touch either top-bar or bottom-bar, and there are no holes to let them in. The object of having the bottom-bar in two pieces is to allow the foundation to go between the two parts. The foundation is cut ½ inch wider than the inside depth of the frame. That allows ¼ inch at the top to go into a saw-kerf in the top-bar, and ¼ inch at the bottom between the two parts of the bottom-bar. The foundation is cut so as to make a close fit to the end-bars at each side, the frame is put on the board, such as is commonly used for putting foundation in frames; the foundation is slipt into the saw-kerf of the top-bar, and then the second part of the bottom-bar is put in place. a single small wire-nail is driven at the middle to fasten the two parts of the bottom-bar together, and then the remaining nail is put into each end of the bottom-bar. Top-bars and end-bars are 1⅛ inches wide, and each part of the bottom-bar ½ inch wide. That allows ⅛ inch between the two parts of the bottom-bar for the foundation.

4. If you put in the dry sticks, the bees will gnaw them out every time. Put a little bunch of the sticks in melted wax, keeping the wax where it will stay hot. At first the air and moisture in the sticks will make a great frothing, and you will not imbed any till all settles and becomes clear. Then with a pair of tweezers, or something of the kind, lift a stick out of the wax, lay it in place, and press it into the foundation with a presser made of a little board about as long as the sticks, or not quite so long, and about ⅜ inch thick. The edge that presses in the sticks must be kept soakt in water, so the wax will not stick to it. Five sticks are used in a frame, one about an inch from each end-bar, the other three at regular intervals. In rare cases I've had the bees gnaw at the sticks, even when cookt in wax, but I don't know why.

5. I have used rather heavy foundation (some I've had on hand for a number of years), but it may be that light foundation would do just as well. Certainly just as light foundation can be used as if wire replaced the sticks.

These sticks allow the combs to be built solid to the bottom-bar (but sometimes the bees will dig under), and I know of no advantage in any way that the wires have over them.—Gleanings.

Blacks vs. Italians as to Hardiness.

Are Italian bees as good to stand the cold as blacks? I had five colonies Italianized last year, and they all died. I had 15 colonies of blacks and lost one; they were all in one row in double-walled hives. A good many bees died in this county the past winter. NEW YORK.

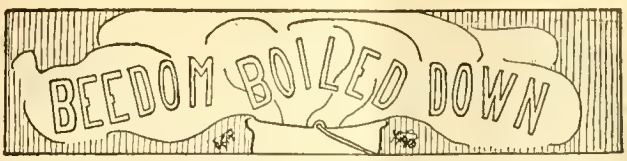
ANSWER.—I don't know whether Italian bees, taken as a whole, differ in hardiness from blacks. It is quite likely that *your* Italians are not as hardy as *your* blacks. But you must remember that all blacks are not alike as to hardiness and other qualities, and also that Italians vary.

Pink Comb and Honey.

Why do bees build pink comb and store honey of the same color in the brood-frames? Some of the combs in our city hives are thus colored. MARYLAND.

ANSWER.—I don't know what plant they are working on to produce such results, but it is well known that the color of the honey, and to some extent the color of the comb, depends upon the kind of flowers visited.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.



Blocking Up in a Hot Climate.—In Gleanings, J. K. Hill, of Texas, says he has been troubled every year until the past year with combs melting down in hives standing in the sun, there being a ½-inch entrance the whole width of the hive. Last year he put a ⅞-inch block under each corner of his hives and never lost a comb. Only 2 swarms came from 125 colonies, whereas in previous years swarming had been very troublesome.

How Should Frames Run?—At the Ontario convention the great majority preferred what is called the "cold system," with the frames running toward the entrance. One reason was that the hive could be tipt forward so water would run off, also so that late honey for winter would be stored at the back end, and Mr. Hall wanted the back end of the hive at least four inches higher than the front, so that it would be warmer.—Canadian Bee Journal.

When to Put on Sections.—In the Canadian Bee Journal objection is made to leaving colonies without sections till after the harvest has commenced, thereby inducing the bees to swarm, and it is also objected that in some cases mischief is done by putting them on before the light honey comes, having dark honey in the center of a section. Some advise putting on extracting-combs to catch the first flow of dark honey, then giving sections when the light flow starts.

To Keep Pollen Out of the Extracting-Super was discust at the Brantford convention reported in the Canadian Bee Journal. One way was to keep the queen out of the extracting-super, but it is not so clear just what was meant by Mr. Armstrong saying, "The queen will not be able to go thru the excluders loaded with pollen." Mr. Atkinson thought there would be no trouble if two stories were allowed for brood. Mr. Alpaugh thinks there is less trouble if the super combs are well drawn out.

As to Amalgamation, Stenog, the gleaner of "Pickings" in Gleanings, says:

"Touching the union of the 'Association' and the 'Union,' Mr. York well says, 'The door is open for the Union to come into the Association whenever it decides to cast in its lot.' That's it. One of the associations must simply cease to exist, and its members be incorporated in the other. Those who are trying to unite certain other organizations nowadays would do well to read Mr. York's words. The only way is to find the best, and annihilate the others by disbanding in favor of the better."

Handling Hoffman Frames.—The editor of Gleanings refers to an article in American Bee Journal for April 6, by C. Davenport, whom he styles "one of the most practical writers in all beedom," and commends the tool by which Mr. Davenport handles his frames so well. One feature that was not mentioned, is that of handling two or three frames at a time, whereas with loose-hanging frames each frame must be lifted out separately. Mr. Root thinks this an important matter. He disagrees with Mr. Davenport as to the edges of the end-bars, preferring the V edge to the plain.

Large Frame Hives vs. Two-Story Hives.—A. N. Draper discusses the matter in Gleanings. He quotes Langstroth Revised as saying that the Quinby frame is too long and the Langstroth too shallow, advising beginners to use a frame as long as the Langstroth and as deep as the Quinby. After having handled as many as 200 colonies in Langstroth frames three stories, and afterward trying the large hives and frames, and especially noting the difference in wintering, he is a strong advocate of the large frame. Mr. Draper challenges Editor Root to make the experiment of having 30 or 40 ten-frame hives the same as the Langstroth, only with frames 2⅛ inches deeper, agreeing to pay the expense of making them if after three years' trial the editor is not pleased with them.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JUNE 1, 1899. NO. 22.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Spraying Law of New York came near being repealed, according to reports in Gleanings. W. F. Marks says:

"The opposition stole a march on us, and got practically thru the Assembly before we knew it; but when their bill reacht the Senate, thanks to Senator Raines, who was watching for it, it was *promptly killed*."

Intelligent horticulturists know that there is no need to spray when trees are in bloom, and that harm may come of it, but so long as some of them are not intelligent the lawmakers need watching.

Spelling Reform in Chicago Schools.—It seems that the effort to simplify English spelling is making some headway these days. We find the following in the Chicago Daily News for May 24, which shows pretty conclusively that the Chicago board of education means to be progressive:

The business office of the board of education has adopted the reforms in spelling suggested by the National Educational Association, and approved of by Dr. Andrews. In recent notices to persons having business with the board, Clerk Sam Frankland and his assistants in the office of Business Manager Guilford have used the new system.

The contractors are now notified in abbreviated words that they must get "thru" with their work on specified time, while business firms from which the board expects to make purchases are requested to send "catalogs" to the board. All of the words included in the list are spelt according to the new method. The same system has been adopted by the other departments of the board.

The words in the list are: Altho, catalog, decalog, pedagog, demagog, program, prolog, tho, thoro, thorofare, thru, thruout.

Dr. E. B. Andrews, ex-president of Brown University, is the superintendent of the Chicago public schools. We are glad to welcome him and his board of education to the ranks of "spelling reformists." For several years past the American Bee Journal has been aiding in this needed reform, and grows stronger in its conviction that it is pursuing the right course. Others are invited to join in the good work.

Honey and Beeswax.—We find in the 1898 Yearbook of the United States Department of Agriculture, that there was reported last year honey to the value of $98,504, and 151,094 pounds of beeswax, valued at $41,827. During the same time there was imported 96,604 pounds of honey valued at $38,158, and 272,097 pounds of beeswax valued at $72,473.

The Big-Little-Hive Fight has been in progress for some time, and among the chief disputants have been Messrs. Dadant and Doolittle. A somewhat diplomatic distance has been kept up, however, between these two, until the last number of Gleanings, in which Doolittle clinches close with Dadant, and a somewhat lively tussle may be expected. Both men are able, both men are honest, and possibly both are correct from their own stand-points, and it is probable that a good bit of light may be brought out by them.

How Does the Queen See in the Dark, so as to lay eggs on the opposite side of the comb? is a question that has been somewhat considered. Some have thought there might be something like X-rays which allowed the queen to see thru the comb so as to lay opposite the brood on the other side. A. J. Wright says in Gleanings that the queen needs no light on the subject, that it's the "rays of dark" that the queen works by! The accompanying foot-note gives no sign that the editor has any doubt as to the correctness of this theory, but some of his readers who are not 'way up in the science of optics may desire to inquire what "rays of dark" are. Please turn the light on this dark subject, Editor Root; or would "turning on the light" destroy the "rays of dark"?

New York's Foul Brood Law.—The law relating to foul brood in the State of New York has recently been satisfactorily amended, thanks to the hard work of Mr. W. F. Marks, one of the widest awake bee-keepers, and to Hon. Jean L. Burnett, a hustling member of the State legislature. The amended law reads as follows:

(Chapter 223, Laws of 1899.)

AN ACT to amend chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, entitled, "An act in relation to agriculture, constituting articles one, two, three, four, five, six, seven and eight of the general laws," relative to prevention of disease among bees.

The people of the State of New York, represented in Senate and Assembly, do enact as follows:

SECTION 1. Section eighty of chapter three hundred and thirty-eight of the laws of eighteen hundred and ninety-three, is hereby amended so as to read as follows:

§ 80. The prevention of diseases among bees.—No person shall keep in his apiary any colony of bees affected with a contagious malady known as foul brood; and every bee-keeper, when he becomes aware of the existence of such disease among his bees, shall immediately notify the commissioner of agriculture of the existence of such disease.

§ 2. Section eighty-one of said act is hereby amended so as to read as follows:

SEC. 81. Duties of the commissioner.—The commissioner of agriculture shall immediately, upon receiving notice of the existence of foul brood among bees in any locality, send some competent person or persons to examine the apiary or apiaries reported to him as being affected, and all the other apiaries in the immediate locality of the apiary or apiaries so reported; if foul brood is found to exist in them, the person or persons so sent by the commissioner of agriculture shall give the owners or caretakers of the diseased apiary or apiaries full instructions how to treat said cases. The commissioner of agriculture shall cause said apiary or apiaries to be visited from time to time as he may deem best; and if, after proper treatment, the said bees shall not be cured of the disease known as foul brood, then he may cause the same to be destroyed in such manner as may be necessary to prevent the spread of the said disease. For the purpose of enforcing this act, the commissioner of agriculture, his agents, employes, appointees, or counsel, shall have access, ingress, and egress, to all places where bees or honey or appliances used in apiaries may be, which it is believed are in any way affected with the said disease of foul brood. No owner or caretaker of a diseased apiary, honey, or appliances shall sell, barter, or give away any bees, honey, or appliances from said diseased apiary, or expose other bees to the danger of said disease, nor refuse to allow the said commissioner of agriculture, or the person or persons appointed by him to inspect said apiary, honey, or appliances, and do such things as the said commissioner of agriculture, or the person or persons appointed by him shall deem necessary for the eradication of said disease of foul brood. Any person who disregards or violates any of the provisions of this section is guilty of a misdemeanor, and shall be punisht by a fine of not less than thirty dollars, nor more than one hundred dollars, or by imprisonment in the county jail for not less than one month, nor more than two months, or by both fine and imprisonment.

§ 3. This act shall take effect immediately.

Hurrah for New York bee-keepers! They went after it and got it. Illinois bee-keepers went after it too, and—"got left." Well, we hope that some day Illinois will have a legislature that will respect the rights of the people a little more, and do justice to so worthy a class as are the bee-keepers of this State.

The Georgia State Fair, to be held at Atlanta, Oct. 18 to Nov. 4, 1899, proposes making quite a feature of the apiary department. The following is the premium list offered on bees, honey, etc.:

	1st.	2nd.
Comb honey, quality and manner of putting up for market to be considered	$13	$6 00
Extracted honey, quality and manner of putting up for market to be considered	13	6 00
Beeswax, not less than 20 pounds	7	3 00
Italian bees in one-frame observatory hive, purity of workers considered	5	3 00
Italian queen-bee	5	3 00
Honey-vinegar, one gallon	2	1 00
Apiarian supplies, best collection	15	8 00
Comb foundation for brood-chamber	2	1 00
Comb foundation for surplus honey	2	1 00
Honey-extractor	3	2 00
Wax-extractor	3	2 00
Bee-hive for comb honey	3	2 00
Bee-hive for extracted honey	3	2 00
Shipping-case for comb honey	2	1 00
Uncapping-knife	1	50
Smoker	1	50

We trust that our Georgia subscribers, who can do so, will help to put up a good bee and honey exhibit. For any further information address T. H. Martin, Secretary, Prudential Building, Atlanta, Ga.

Honey-Muffins. Sift together one and a half pints of flour, two teaspoonfuls of baking powder, and a small half-teaspoonful of salt. Work in two tablespoonfuls of butter; add three beaten eggs, one cup of honey, and half a pint of milk. Beat thoroly and bake in a hot oven.—Good Housekeeping.

EDITOR HUTCHINSON wants a good article on hunting wild bees. We don't know any one better fitted to write such an article than himself.

* * * * *

HON. J. M. HAMBAUGH, we learn, has recently been appointed inspector of apiaries for San Diego Co., Calif. Writing us May 18, he says:

"There has been a slight honey-flow from sage the past two weeks, but there will be little or no surplus. This is even more than was expected, owing to the long drouth. This section has been badly scourged the past two years."

* * * * *

PROF. A. J. COOK, of Los Angeles Co., Calif., writing us May 18, said:

"As I hoped would be true, the bees are getting quite a deal of honey. It may not last, but I hope it will."

We understand that Prof. Cook expects to come East in July. It is over five years since he went to California. We hope he will arrange to be at the Philadelphia convention, the first week in September. He would enjoy it, and so would everybody else.

* * * * *

THE SEVENTEEN PROMINENT CANADIANS, members of the "Senate of Canadian Bee-Keepers," shown on the first page, form a handsome group, and we are glad of the opportunity to present them to our readers. Mr. D. W. Heise, the "Noter and Picker" of the Canadian Bee Journal, referring to the group picture, had this to say in the same issue of the journal in which the engraving appeared:

"It is not often that I have occasion to find fault with my colleagues in convention, but when two honorable senators will so far lose their self-respect as did F. A. Gemmill and W. Atkinson, at Brantford recently, by making an aggravated assault on a photographer's personal property, in attempting to walk thru a supposed open door (a plate glass mirror) to interview the fellow whom they thought resembled themselves in the adjoining room, I consider it a lasting disgrace. The demand for immediate senate reform is justifiable, and imperative.

"While being arranged in a proper position for a snapshot in the picture gallery, where the reprobates above referred to ran foul of the mirror, Mr. F. Holtermann (more commonly known as the editor of the Canadian Bee Journal) exprest a desire to be tickled down about the fourth rib; or that some one would tell a funny story that would cause the muscles of his face to contract and bring on a smile, which is very, very rarely found there. As this picker happened to be standing by his side, and owing to the disparity in our height, I was in a very advantageous position, and kindly consented to keep up the 'tickling' while the other fellows told stories (real funny ones). Now, dear reader, when that picture appears in the journal (which I expect will be with this issue), just observe the effect the tickling and stories had on that editor. Perhaps I 'tickled' too hard, or perhaps the other fellows told stories too hard. Instead of producing the smile, his countenance really takes on the expression of one in extreme agony, and no smile at all. Poor editor!

"This effect on the said editor reminds me of the Dutchman who purchast a small porker from his Irish neighbor. After keeping said porker until he grew big and fat, the pig-killing day arrived, and after breaking Mr. Grunter's skull with an axe, and 'giving him it in the neck' with a huge knife, of course Mr. G. lay motionless, and just as the Dutchman attempted to take him by the leg to place him in a more congenial position, Mr. Grunter decided to make his last kick on earth, with the result that his foot came with tremendous force against the Dutchman's 'bread-basket,' which paralyzed him for some minutes. When he fully recovered from the nervous shock, he exclaimed, 'Irish—ish—Irish, deat or alife!'

"Moral:—A grim editor will be the same whether in a picture gallery or in his private sanctum."

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HILDRETH & SEGELKEN,

at the old stand, where we have had the pleasure of serving our friends for the past 11 years. Management and supervision will be the same and our business methods—those of square and honest dealings—will be practiced as heretofore.

We believe we have now the esteem and confidence of our shippers thruout the country, and that our dealings, as a rule, have been of the most pleasant nature.

Our additional capital will put us in position to increase our already large business still farther, if possible, and at the same time enable us to treat our shippers even more liberally than heretofore, in making advances, etc.

Records will show that we handle by far the bulk of all the honey sent to our market. We make honey the principal part of our business, are personally acquainted and have trade connections all over the country, which enable us to handle any amount of honey to better advantage than any other house.

Old shippers know us and will bear us out in what we have said. Those bee-keepers who do not know us and have had no dealings with us, we would cordially invite to correspond with us and make our acquaintance. We not only handle on commission but buy largely as well, from small lots to carloads, for spot cash.

We wish to call the attention of the Southern bee-keepers to the fact, that our market never was in better condition than this season. Old stock is disposed of and the market is bare, with a good demand. New crop will find ready sale and at higher prices than have ruled for years past. We would advise them to send their honey, while there is a good demand at good prices, as later on conditions of the market may change.

We also handle **MAPLE SUGAR AND SYRUP** very extensively, and would be pleased to hear from those having any of these goods to offer.

In conclusion, we wish to extend our thanks to all of our shippers for their past favors, and trust to receive their kind consideration in the future.

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Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

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In the multitude of counsellors there is safety.—Prov. 11-14.

The "Golden Method" Compared With Others.

Query 90.—What percent more of surplus honey do you think can be obtained by the Golden method than by ordinary methods?—OHIO.

Jas. A. Stone—I never tried it.

J. M. Hambaugh—I don't know.

Dr. J. P. H. Brown—I do not know.

Emerson T. Abbott—I do not know.

Eugene Secor—I don't care to guess.

S. T. Pettit—I don't think it a fair question.

A. F. Brown—My experience too limited to say.

Dr. C. C. Miller—I don't know. I never tried it.

Mrs. J. M. Null—I have never tried the Golden method.

E. Whitcomb—I have never tried the Golden method.

P. H. Elwood—I have never tried the Golden method.

R. L. Taylor—None, I think, but I haven't tried that method.

W. G. Larrabee—I have no experience with the Golden method.

G. M. Doolittle—Ask Mr. Golden. Keep an "eye" on the reports regarding it, and compare them with others who use the

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Golden Italian Queens Warranted purely mated; all Queens by return mail; will run 1,200 nuclei; Queens reared by Doolittle's method; safe delivery and satisfaction guaranteed; have 11 years' experience and know what good Queens are.

Prices 75c each; 6 for $4. Selected, $1; 6 for $5. After July 1, 50c each; 6 for $2.75. Selected, 75c; 6 for $4.

My Queens are prolific and workers, industrious as well as beautiful to look at; hundreds of testimonials prove this. I just now have a nice lot of Queens which have just started to lay. Order at once and I will send you something fine.

SPECIAL LOW PRICE on Queens in quantities. Address,

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The A. I. Root Company

MAIN OFFICE AND WORKS:
MEDINA, OHIO.

ordinary methods. Time will prove more than my "think" possibly can.

Dr. A. B. Mason—I don't know; have not tried the Golden method.

O. O. Poppleton—I have no experience with the Golden method.

Mrs. L. Harrison—I have had no experience with the Golden method.

D. W. Heise—I have never tried the Golden method, therefore I cannot say.

E. S. Lovesy—With able, practical management I believe there would be very little difference.

Prof. A. J. Cook—Except one speak from experience, one better not speak. I have no experience.

Mrs. A. J. Barber—I have never tried it, and I do not believe it would succeed at all with us (in Colorado).

C. H. Dibbern—As I have not practiced that method I can only make a guess, and you can do that as well.

E. France—I don't know anything about the Golden method. All the method I know is "France's method"—get all you can.

Rev. M. Mahin—I have not tried the Golden method, nor seen it tried by any one else. I may not know as much about it as I think I do, but I have no faith in it.

J. E. Pond—I know nothing by practice of the "Golden method," and can say nothing of it by my own experience. As a matter of opinion, however, I am inclined to the belief that little if any gain can be made by its use.

C. Davenport—I have not tried this method, but I have great respect for what Mr. Golden says, or writes. He is a veteran, and belongs to that class who have done so much to advance bee-keeping from old-time methods to what it is at present.

Adrian Getaz—I have not tried the Golden method. Any kind of management that will successfully prevent swarming, or rather increase, will give far better results than the ordinary methods. In poor seasons it may make all the difference between some surplus and none at all.

G. W. Demaree—The answer to this question must be judged by the meaning the reader attaches to your expression, "by ordinary methods." In my experience as a honey-producer, more depends upon close attention to all present conditions—utilizing all the forces of the apiary at the right time—than depends upon the peculiar construction of the hive.

GENERAL ITEMS

Colonies Very Strong.

I have been in the bee-business for the past four years, and I find a great deal of enjoyment in working with bees. I had 12 colonies last fall and I wintered them on the summer stands. I have been very fortunate as I lost but one. My colonies are very strong; they are Italians.

Whiteside Co., Ill. J. W. ISHERWOOD.

Northwestern Illinois Convention.

The bee-keepers of the western part of the Northwestern Illinois Bee-Keepers' Association, held the spring meeting at the home of John Wagner, in this (Stephenson) County. The attendance was small, as the rain in the morning and the day before left traveling in bad shape, but those who were there seemed enthusiastic and hoped for better crops of honey this season. There was small loss reported, and bees generally in good condition.

Mr. Wagner met us at the station with his team and took us to his delightful residence where it was one's own fault if he did not enjoy himself, for Mr. Wagner and

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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SILVER GRAY CARNIOLAN —QUEENS—

—ALSO THE—

Golden and 3-banded Italian.

Untested, 50c each; tested, 75c. Purity of stock and safe arrival guaranteed.

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Thousands in successful operation. Lowest priced 1st-class hatcher made
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IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queen, $3.00 each; the same with untested Queen, $2.25. Ready to fill orders by June 1. Correspondence solicited. MATE WILLIAMS,

20A4t NIMROD, Wadena Co., MINN.

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WHEN YOU WANT ..QUEENS.. Send us your order. We will fill it by RETURN MAIL, with the best of Italians, large yellow Queens, healthy and prolific, workers gentle and the best of honey-gatherers. Tested Queens, $1.00 each; Untested, 75c; $8.00 per dozen. Send for our price-list, and see what others say.

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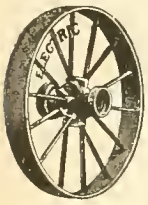
It is a matter of great convenience and a saving of labor for a farmer to have a low, handy wagon. They save more than half the labor of loading in hauling manure, hay, grain, corn-fodder, wood, stones, etc. The man who already has a wagon may have one of these low, handy wagons at the small additional cost for a set of wheels. These Electric Steel Wheels, with either direct or stagger spokes, with broad-faced tire, are made to fit any axle. You can convert your old wagon to a low, handy wagon in a few moments' time. You thus virtually have two wagons at one price. Write to the Electric Wheel Co., box 16, Quincy, Ill., for their catalog, which fully explains about these and their Electric Handy Wagons, Electric Feed Cookers, etc.



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Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

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wife had everything in good style, while they had provided enough for a full-sized camp-meeting. I hope they may live many years and have their share of honey.

We mist many faces that we have met at our conventions, and saw some new ones which we hope to see at future meetings.

JONATHAN STEWART.

Stephenson Co., Ill., May 16.

Moving Bees to an Orchard.

The loss of bees here the past winter has been heavy, especially among farmers, at least 75 percent. I lost 5 out of 46 colonies. The weather for the past month has been very favorable, and they are breeding up fast. The prospect for clover and linden is good.

A man living 1½ miles from me came yesterday to get me to put 20 colonies or more in his 80-acre apple-orchard for 10 days, to fertilize the bloom. He offered 15 cents a colony. I took 10 colonies, but do not like to risk moving many now while they are gaining so fast here.

Wayne Co., Iowa, May 11. J. C. DAVIS.

Very Dry Weather.

The weather here is very dry and bees have done nothing up to date. As is usually the case, as soon as the trees blossomed cloudy weather set in. There will be no clover honey unless rain soon comes along.

HENRY ALLEY.

Essex Co., Mass., May 19.

Heavy Winter Losses.

Nearly all the bees wintered out-of-doors were lost. One bee-keeper has only 15 left out of 56 colonies; another has one left out of 26. Those who cellared their bees are much better off—loss very light.

The weather now is very unfavorable for the bees—cold and rainy nearly all of the spring—in fact, very few good days for them. From all accounts the "golden's" have wintered best. GEO. RANDALL.

Cherokee Co., Iowa, May 20.

One of the Hustling Brown(ie)s.

I have three honey flows here and it doesn't seem likely that all of them will fail. I am trying hard to get my dishes right side up to catch all the flows. I do believe I am in a good location for bees. I have just extracted over a barrel of honey that was in the way of the queens. (You see I put them into winter quarters with a plenty.) I have put extracting supers on some of the strong colonies so they can remove the honey from the brood-nests and make room for the queens, and the bees are rushing the honey up-stairs just as I told them to. They have been getting considerable from fruit-bloom. What they are working on just now I do not know, but they are getting their "daily bread."

I am almost as busy as the blessed bees are; I get up every morning at 4 o'clock, and I work at not a thing but bee-keeping.

Erie Co., N. Y., May 23. E. W. BROWN.

King-Birds Destroying Bees.

I had a little experience to-day that was quite unusual, in fact I never heard any thing like it in bee-experience. It has been cold, cloudy and windy for three or four days, finally ending in a cold, driving rain, and I suppose the birds have become very hungry. To-day the bee-birds gathered in my apiary to the number of two or three dozen, sometimes two or three sitting on one hive. It was cold and windy so there were but few bees flying, otherwise I believe they would have done considerable damage. I tell you, seeing is believing, and it will be useless to try to convince me that the king-bird is anything but an enemy to the bee-keeper. Why, they would actually sit on the corner of a hive and watch down at the entrance, and if a bee showed herself or took wing she was gobbled up in short order.

The past severe winter seems to have

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CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

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We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

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J. M. Jenkins, Wetumpka, Ala.

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21A3t WENHAM, ESSEX CO., MASS.
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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.
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Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address
Theodore Bender, Canton, Ohio.
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made away with all kinds of insects, so I suppose the birds are hard prest for food.

Bees that were left out-doors last winter almost all died. I heard of one man who had 18, lost all; another who had 12 or 14, has one left; another, who had a big dry-goods box that has had a colony in it for four or five years, always wintered on summer stands without protection, is now out of the business. My own loss is about 10 per cent, mostly all owing to leaving out-doors, my cave being too small to hold all.

The bees have done fairly well up to the present, but fruit-bloom is a failure on account of cold winds and rain, so I suppose we will have to feed some.

All my alsike clover winter-killed, but there is some white clover left, and perhaps the present wet weather may bring it on in good "shape" yet. E. S. MILES.

Crawford Co., Iowa, May 14.

Preserving Fruit with Honey.

On page 221 is an item in regard to preserving fruit with honey instead of sugar. Some years since I carried on business in St. Louis, and among my stock I kept fruit and honey. A customer of mine wisht me to be sure to secure her a couple of bushels of damson plums, and as they were very scarce in that vicinity, I had to send to Indiana for them, and obtained about four bushels; by the time I got them and paid the charges and first cost they stood me a pretty good figure, and then my customer backt out, and I was out—both pocket and temper.

I kept the plums a few days, and could not sell them. I had in the shop about 500 pounds of extracted clover honey, very fine, and I decided either to spoil a whole lot of honey and all the plums, or else make my money out of them.

I treated the plums the same as I would to preserve them with sugar, but instead of pound for pound I used two pounds of honey to one of plums. I put them up in gallon stone jars, covered them with paper,

SPRAYING with our new patent **KEROSENE SPRAYERS** is simple indeed. Kerosene Emulsion made while pumping. 12 varieties sprayers. Bordeaux and Vermorel Nozzles, the World's Best. **THE DEMING CO. Salem, O.** Western Agents, Hennion & Hubbell, Chicago. Catalog, formulas free

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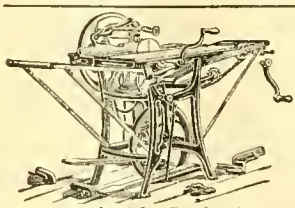
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.



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of responsibility to the **fence question** is discharged to the extent that the **Page** is introduced. Have you **taken it up?**
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Are Models of Perfection.

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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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Bingham Perfect Bee-Smokers

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

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We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

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300 Cases of Second-Hand 60-pound Cans

We have found another lot of 300 cases (two cans in a case) of second-hand 60-pound Cans—practically as good as new. We offer them at 45 cents per case in lots of five, f.o.b. Chicago; or in lots of 10 cases or over, 40 cents per case. Address,

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and then tied a cloth over them, and set them in the back end of my ice-box. At the end of a month I sampled them, and one taste was enough. They were bitter, pungent, and tasted bad generally. I left them in the ice-box until November, and then took them out and set them in a cool place until Christmas, when I sampled them again, and found they had undergone a complete change for the better. I only had to offer them for sale, and got $2.00 per gallon for them, and calls for more.

I think that using double the amount of honey with many of our fruits will prove very successful. J. H. HERMANCE.

Garland Co., Ark.

Thirteen-Year-Old Josie.

On page 292, Cogitator asks if that 13-year-old Josie is a boy Josie or a girl Josie. Well it *was* a 13-year-old girl Josie, but now I am 14 years old, and I think I ought to eat more honey than before.

MISS JOSIE M. TICHENOR.

Crawford Co., Wis.

Several Apiarian Paragraphs.

Years ago a bee-keeping friend went to one of the most successful apiarists we have here, to find out how to prepare his bees for winter, and the satisfaction he got was that he would have to learn it. The questioner had been losing his bees quite heavily during winters, and wanted a remedy for the evil. Here is the remedy as I have found it:

Buy a text-book, subscribe for one or more bee-papers, and thus get valuable information from those who let their light shine.

Do bees ever carry eggs from one cell or comb and place it in another? For myself, I believe it is such a delicate piece of work that bees have never done it.

Honey-dew was gathered quite plentifully in 1898, judging from the amount found on the market last December. It is a pity, for it hurts the sale of honey from fall flowers, such as touch-me-not, which is our main source here.

The honey-dew I found on the market was of a somewhat dark color or reddish cast, and did not granulate, while fine honey from fall flowers granulated as soon as cool weather came. The amount of damage done by honey-dew is hard to estimate, as the market was well supplied with the vile stuff put up in glass tumblers with the producer's name on it. I should think that one glass of such honey would satisfy one's appetite for a long time. I am disgusted with that kind of business.

We have a basswood shade tree that comes in bloom a week later than other trees here, and goes out of bloom about a week later than other basswoods. It has bloomed this way for years—ever since it began to bloom. C. A. BUNCH.

Marshall Co., Ind.

About Wintering Bees, Etc.

In reading Miss Fannie C. Damon's failure in wintering her bees, I thought perhaps the way I had mine protected at the entrance might be of use to her, or some one else that did not do the same way.

I did not know how the winter might be, so at the commencement of the snow, I had a lot of bottom-boards made. I set one on its side at the entrance of each hive, a little way out at the bottom, then leaned it close against the hive at the top, so that it made a space under it. When it snowed I would get thru the snow to each hive, and draw the top out enough to get the snow from the entrance and put the board back. I would leave it bankt on the north side to keep the cold out, but clear it away on the south side, so no ice formed at the entrance. I had Hill's device on each brood-frame, then canvas over that, the top on, and a cushion on that. Some of the cushions had cork, and some dry grass in them; that was all the protection they had except what I told in my previous letter. I don't see any difference between the ones I used

the fodder around and the ones I had the boxes around. All did well.

I have changed four of my hives to the Golden method. I intend to put the first swarm into them and see whether I can do any better with them than with the others. If I do, so much for having the American Bee Journal, which I could not think of being without, nor should any one that has any bees. I am anxious to see it every week; if I get my mail on Friday it is always on hand.

We have had a cold, late spring. I hope we will have better weather soon. We have had a cold, late spring ever since I have been in the bee-business—three years.

I see a question about putting bees into the garret. A friend of mind has three colonies in his garret, and they have done well. I think he took the frames out of the hive and put them in a box. I did not see the box, but it was long enough to put one hive in each end, a space between each one, and a hole made in the weather-boarding opposite each one, and fixt so they could not get out into the house. The box has a tight cover to it, so they can look in by lifting the cover. He told me they had stored handsome honey. They are on the south side of the attic. He said they all used the same passage-way now, that is, the two in the same box. I believe he said he took a piece of tube and put in the box, and cut thru the siding, and made a little alighting-board outside, as it bothered them to strike the hole right.

MRS. SARAH GRIFFITH.

Cumberland Co., N. J., April 17.

Convention Notices.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.

Hutto, Texas.

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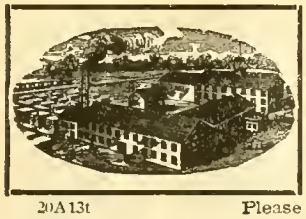

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, May 8.—Not anything of consequence doing; a little honey is being sold at prices that have been prevailing for some time. White comb is scarce, but there is a surplus of dark. Extracted unchanged. Stocks light. Beeswax, 27c. R. A. BURNETT & Co.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey. M. H. HUNT.

NEW YORK, May 9.—Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 55@60c per gallon. Beeswax quiet at from 26@28 cents, according to quality.

Our market is in first-class condition, being bare of extracted honey, and demand good. New crop is beginning to arrive from the South. Comb honey is well cleaned up; some demand for white but demand for dark has ceast. HILDRETH & SEGELKEN.

SAN FRANCISCO, May 3.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7½@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

In quotable values there are no changes to record. A ship clearing this week for Siberia took 231 small cases of extracted, being honey repackt by jobbers. There will be a fair yield this season in the San Joaquin, probably 150 cars, mostly alfalfa honey, but the production will be very light in the balance of the State.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year. BLAKE, SCOTT & LEE.

KANSAS CITY, May 15.—No. 1 white comb, 15c; fancy amber, 14c; No. 1 amber, 13½c; fancy dark, 13c; No. 1 dark, 12c. White extracted, 6c; amber, 5½c; dark, 4@4½c. Beeswax, 25c. C. C. CLEMONS & Co.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c. A. B. WILLIAMS & Co.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season. BATTERSON & Co.

OMAHA, May 18.—It is a hard matter just now to give quotations that would have any meaning at all. With the exception of small lots of buckwheat—very good for its kind, but it is not the kind wanted here, which dragged at 8@9 cents—there have been no new receipts, and there will not be a pound of honey carried over in dealers' hands. First receipts of new crop will certainly be pickt up eagerly at fancy figures. PEYCKE BROS.

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS

—reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

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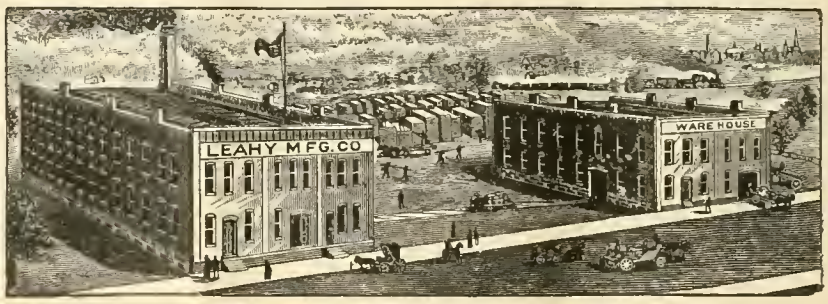

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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JUNE 8, 1899. No. 23.

CONTRIBUTED ARTICLES

The Once Famous Linswik Sisters and Their Experience with Bees.

BY EDWIN BEVINS.

SOME time ago Editor Hutchinson visited the Linswik sisters at their home in northern Michigan. I am indebted to one of these sisters—the one with the beautiful name—for the method I use in rendering beeswax, and also for some hints on the wintering of bees, which hints I found in a stray number of the Review received long ago. I read the story of the sisters' experience in bee-keeping with considerable interest, also with some surprise and some pleasure. Surprise that their interest in the pursuit has dwindled to the keeping of only five colonies; pleasure at knowing that they keep these, and have kept more, partly because of the things connected with the pursuit which they would not sell for cash if they could.

I am sorry to learn that the sisters are now suffering the penalty for too much early zeal, that a reaction has come, and that weariness has followed endeavor. At the age when I commenced the keeping of bees enthusiasm is dead or dying. A person at that age, if he has been at all observant, has seen too much of life and the world to be any longer the victim of illusions. Whatever is undertaken is apt to be undertaken with more or less of deliberateness and calculation. And yet, I sometimes wish the old boyish

The Old Home of Two Lady Pioneer Bee-Keepers in Michigan—From the Bee-Keepers' Review.

enthusiasm would come again. As that cannot be, I mean to husband the resources of muscle and mind so that I may always feel *a little* like a boy, even if I live to be a hundred years old.

Other bee-keepers besides the sisters have tried so hard to know everything and do everything pertaining to the pursuit, till nerve and brain have become so weary that they turn for rest to something else. There are many things pertaining to apiculture which the honey-producer can afford not to know. It is no great matter to me whether a swarm of bees is an organ or an organism. It is of considerable importance to me to have every colony in the yard in the best possible condition to do efficient work when the time for work comes round, and my efforts will be directed to this end.

One mistake of the sisters—repeated by many no doubt in these later and better days—was in reading so little before they undertook to do so much. The bee-papers (any of them) are great helps to the beginner, and he should study the advertisements with special care. They will save him many a dollar. Then there are hints to be found all thru their pages that will save the young bee-keeper from making many mistakes. In order to get the greatest good from these hints it is necessary for the beginner in bee-keeping to get and study a good bee-book till he has become tolerably familiar with bottom facts and first principles. Then the beginner will not have to ask a whole lot of foolish questions—questions that, later in life, he will be ashamed that he ever askt. And then Dr. Miller will have a little rest, as his occupation will be partly gone.

The Linswik sisters, it seems, have found out that there is not a great deal of money to be made in honey-production. Some others, it seems, found out the same thing years ago, and degenerated into book-makers and supply-makers for the throngs of new and old bee-keepers who have hopes of succeeding in a pursuit in which the others had found large success impossible.

I am not building any castles in Spain or here, out of the proceeds of the apiary, but I have kept bees long enough to feel assured that there is reasonable pay for their intelligent and economical management.

Decatur Co., Iowa.

[Cyula Linswik and her sister (altho that's not the real name), as Mr. Bevins says, kept bees in northern Michigan, and the older readers may remember how delightfully were told in the bee-papers their haps and mishaps. All that was years ago, and nothing has been heard from them for a long time. Very pleasant it was, on opening the Bee-Keepers' Review for November, 1898, to find an elegant picture of the old home of the two ladies, and also their present home, together with a sketch of their career written by the same pen that so charmed us years ago. (Thru the kindness of the Review we are enabled to show the same pictures to our readers).

In 1869 they took up their abode in the old home, a log house surrounded by "the forest primeval," with bears, wolves and deer for neighbors, the nearest post-office being reacht by a trip of 20 miles over an unspeakably bad road.

Minute particulars as to the result of their bee-keeping are not given, but Editor Hutchinson avers that they have been very successful, he, himself, from first to last, having paid them several hundred dollars for bees, and he says the honey they produce is as fine as any he has seen. The little that is told as to their bee-keeping career, as written by one of the sisters, is here given in full:—EDITOR.]

In December, 1871, there appeared in the New York Tribune an interesting report of the meeting of the American Bee-Keepers' Association, at Cleveland, Ohio. Glancing it over, my attention was arrested by the fact that two ladies took a prominent part in the proceedings; and that they recommended bee-keeping as pleasant and profitable employment for women. Correspondence with these ladies ensued, advice was askt, received and acted upon with this result: Early in May, 1872, I became the happy possessor of a colony of Italian bees, which had cost me only $25.00, plus nearly $5.00 express charges! When, in June, my sister came home from a six months' visit with a brother in the South, she became my efficient helper and full partner in the enterprise.

We began with no knowledge whatever of bee-keeping; nor had we a bee-keeping friend or acquaintance. The Italian Bee Co.—Mrs. E. S. Tupper and Mrs. Annie Savery—of whom our bees were purchast, had recommended to us a small text-book and a monthly bee-journal partly devoted to agriculture. As the publishers of this journal did not advertise rival publications, nor give the address of correspondents, we were shut out from access to the bee-keeping fraternity. Still, much of our text-book's teaching was good, and often the paper contained interesting and valuable articles from the pens of writers of repute. Perhaps it was as well that, for our first year, we were not too much distracted by opposing counsels, even at the price of some mistakes.

Early in the year 1873, at his office in Saginaw, I met the late Dr. L. C. Whiting, and learned, from some chance word, that to the duties of his profession he added the pleasures of bee-keeping. During the remainder of that sitting every opportunity for articulate speech on my part was filled by a question. I think Dr. Whiting recognized it, compassionately, as a case of bee-fever in the acute stage;

Present Home of Cyula Linswik and Her Sister.

for, in addition to the kindly patience with which he answered all my queries, he quite overwhelmed me with gratitude by offering to loan me a bound volume of the American Bee Journal. It was, I think, the first volume after the interruption in publication made during the war. As I turned its pages at home, I could scarcely believe in my good fortune—that a stranger from the remote backwoods should have been trusted with such a treasure! It was our *open sesame* into the bee-keeping world.

We soon had in our possession the works of Langstroth and Quinby, while the American Bee Journal, the Bee-Keepers' Magazine and Gleanings we began with the first tiny copy of the latter—were regular visitants.

And thenceforth how we studied and experimented, and rejoiced over our bees. Ah, me! that such enjoyment cannot last. That the enthusiasm must die out, leaving only a faint thrill at the memory thereof—the memory of those early days when the bee-yard was a charmed spot, a refuge from loneliness, despondency, even one's own bad temper! And later, when we had more work than play in the apiary, it was still enchanted ground—a place where one could forget the dinner-hour (if there chanced to be a maid in the kitchen), forget the temperature (with the mercury in the 90's), and be totally unmindful and unconscious of extreme weariness—until nightfall and a summons to the supper-table made it only too apparent.

It would have been *pleasant* employment to the last,

had health and strength remained equal to its demands; but there came a time when we thought best to recognize the need of almost total abstinence from the bee-yard. For several years we have aimed to begin the season with no more than two or three colonies, and give to these the least attention possible, without a murmur to let swarms escape and go to the woods, and to cheerfully put off till to-morrow, or next week, or next month, even, the removal of sections which should come off to-day.

Did we find our bee-keeping profitable employment? That depends; if you mean something more than modest wages for time and labor spent—no! But if we may count as gains returns which cannot be measured in dollars and cents—yes! CYULA LINSWIK.

Nov. 3, 1898.

"Getting Farmers to Keep Bees."

BY WM. M. WHITNEY.

UNDER the head of "Editorial Comments," page 264, we find the following quotation, viz.:

"What shall it profit a man if he gain the whole world and lose his own soul"? This is, in my opinion, just what we as bee-keepers are doing when we try to keep our farmer brethren out of the bee-business. Let me give you some reasons why it will pay us to induce our farmer neighbors to keep a few bees:

1st. Farmers are learning that they must spray their fruit-trees, and in so doing are slaughtering bees by the wholesale. Now, if every other farmer owned one colony each, just a hint to them that they might kill all of THEIR bees would be sufficient to prevent this evil.

2nd. It would be no trouble to get them to subcribe for our modern bee-literature, and thus learn that it requires some effort on our part to produce a paying crop of first-class honey. And they would appreciate our efforts to produce GOOD honey. No teacher is as good as experience.

3rd. They would learn to LIKE honey, and so would consume more of it, thus advancing the price of a first-class article.

4th. The final outcome will be I speak somewhat from experience not more than one out of ten will ever make a success of bee-keeping thus no more honey produced, but each one, having acquired a taste for honey, will never again be found without honey on his table thus much more consumed. And they will all say, "I see now that you people earn your money, and that dollars don't roll uphill to you without effort on your part, as I once believed they did."

Now, I honestly think that this is a fair probability of results; and having cleared my conscience of what seemed to me a duty, I submit the foregoing. J. H. TICHENOR.

Now, Mr. Editor, if you had not taken the above advice somewhat seriously, it would seem scarcely to merit a notice. Under the circumstances, I can hardly refrain from telling you what I think about it.

Why the author of the above reasons (?), for the encouragement of farmers to go into the bee-business, should have made choice of the text which he did, from which to preach a sermon, such as he has attempted to do, passes my comprehension. He tells us in his introductory (before he reaches *Firstly*), that we are in danger of losing our own souls by trying to keep our friends and neighbors out of a business which, in his *Fourthly*, he admits that nine out of ten of them would make a complete failure in attempting. Now, it seems to me, that if we take the advice of our "preacher," and encourage our neighbors to do that which we know they stand ten chances to one to make a complete failure in, we are not doing by them as we would have them do by us; and all for the sake, as the sequel shows, of putting a few paltry dollars into our pockets; or, in the language of the text, "to gain the whole world."

The whole proposition seems to be obscure. The "preacher" denounces us for that which he says we are doing, and which we have been taught to believe was according to the spirit of the Gospel, and advises us to do that which it seems his text plainly condemns.

One is reminded of the sermon of the colored preacher in the South, during the days of slavery. He told his hearers that if they did evil, and served the Devil, they would be sure to get "Demnition;" but if they loved the Lord, and served Him, they would receive "*Con*demnition." One brother, who seemed to grasp the situation, shouted, "Den dis darkey'll take to de woods!" Now, I must confess that in the light of the instruction here given, I'm inclined, like the darkey, to "take to the woods." The only safe course for bee-keepers to pursue, under the circumstances, is to say nothing to their neighbor upon the subject, neither pro nor con, for if they do they will get "Demnition" anyhow.

But, seriously, let us consider some of the ideas here advanced. Suppose that every other farmer were induced to deep at least one colony of bees, and, by appealing to his selfish interest, he were kept from spraying his fruit-trees while they were in blossom, what good would that do if the other half of the farmers who don't keep bees saw fit to continue spraying? You see, that to make a success of the scheme the whole fraternity must be brought in.

Well, let us bring a little arithmetic to bear upon the question, and see what the result will be. There are (as an estimate), in round numbers, 300,000 farmers in the State of Illinois; and if each were to commence bee-keeping, it would require an outlay of at least $10.00 to begin with, making a total outlay of $3,600,000 for the entire State, nine-tenths of which—or $3,240,000—is to be absolutely squandered for the sole purpose of instructing the farmer in the matter of spraying his fruit-trees, and to create a taste for honey. Indeed, experience is a faithful teacher, but the price this time is pretty high.

It is not overstating the case to say that at least nine out of every ten would make a complete failure of the business, and the greater number would get no honey with which to create a taste for more. And, again, not one in a hundred would think of subscribing for a bee-paper; in fact, but few take even an agricultural paper.

I would like to draw a pen picture of what would follow such a scheme in about three years after its inauguration, but time and space will not permit. No, no, it will not work; and if the author states the facts of the case it ought not to. "For what shall it profit a man if he gain the whole world and lose his own soul?"

Kankakee Co., Ill.

A Half-Dozen Questions Answered.

BY G. M. DOOLITTLE.

I AM requested to reply thru the American Bee Journal to the following questions, which I will do with the editor's permission:

GETTING BEES TO BUILD COMB.

QUES. 1.—"Is there any way to get bees to build comb when they are disinclined to do so? I fed some colonies until all the vacant comb was filled, but they would not draw out the foundation. This has reference to brood-combs exclusively."

ANS.—I do not see why you failed here, unless your foundation had some other material in it besides pure beeswax; for in all of my experience in feeding, the bees would work foundation as soon as they began to secrete wax to lengthen out the cells or cap over the food. But had the bees been persistent in using the combs in the hive rather than work out the foundation, you could have made them work it by taking their combs away from them and allowing nothing but foundation. In this case they would have to work the foundation in order to find space, or a place to store the food, after they had their honey-sacs well filled.

INDUCING BEES TO WORK OVER WAX.

QUES. 2.—"To what extent can bees be induced to work over wax? Do you not suppose wax could be incorporated with thick sugar syrup in some way so that the bees would work it the second time?"

ANS.—There has been considerable experimenting along the line of having old wax workt over by the bees, such as shaving it up in syrup, etc., but I believe it has been acknowledged by all who have tried it, to be a waste of time and wax, when compared with having the wax made into foundation.

STRAIGHTENING BUCKLED OR BENT COMBS.

QUES. 3.—"What is the best course to pursue with brood-combs that are buckled or bent, so that some of the cells are not deep enough for breeding? Is there any way of bringing them straight? The foundation evidently became bent before the bees workt it out."

ANS.—There was a neglect on the part of some one in having the foundation bent when it was given the bees, or in giving it at such times that the bees did not commence work on it at once, before it had a chance to warp or twist about in the hive. It is best to give brood-foundation to bees only at such times as they are wanting more combs; for unless they do so want, it will not be toucht by the bees unless perchance to mutilate it, because they have nothing to do but mischief.

Then, it is generally better to use foundation in the brood-chamber only in connection with wired frames, which entirely prevents the foundation from sagging or twisting about. But having combs as described, there are two ways of fixing them fit for use by the bees. The first is, by melting them up and working over into foundation again—a plan recommended by some of our more advanced bee-keep-

ers, but a wasteful plan, as I consider it, unless the combs are too crooked ; and, secondly, straightening them in the spring of the year when pretty much free from brood and honey. Take them from the hive to a warm room—whose temperature is up to 90 or 100 degrees—and, when thus warm and pliable, lay on a flat surface and press them in conformity to that surface, cutting out a little strip of comb if necessary, where the worst bulged, so that the combs will come straight without spoiling too many cells by pressing them out of shape. Years ago I straightened many combs in this way, before foundation was known, so that the combs in all of my hives were as straight as a board, and many of these straightened combs are still in my apiary.

DIFFERENCE BETWEEN BEESWAX AND PROPOLIS.

QUES. 4.—"What is the difference, chemically, between beeswax and propolis? Is propolis a special product of the bee as wax is? Do bees consume anything to produce propolis?"

ANS.—Beeswax is a fatty substance peculiar to the bee, and produced by the consumption of honey on a plan similar to animals, such as the hog and cow consuming grains of various kinds to produce lard and tallow, the same being of a fatty nature, but differing from beeswax to a considerable extent. Who can tell us more on this subject, as I am no chemist?

Regarding propolis, bees do not produce it at all, but simply gather it from the resinous exudations of certain plants or trees, and from old hives, etc., where it has been previously placed by other bees. The tree known as the balm-of-gilead, and the horse-chestnut, give the most of the propolis gathered in this locality, the buds being well covered with this resin during the greater part of the summer season.

DO BEES KNOW BEST AS TO UPWARD VENTILATION?

QUES. 5.—"Do you believe the bees know what is better or best for their good? If it is best for them to have upward ventilation, do you not suppose they would provide therefor instead of sealing everything up tight at the top of the hives?"

ANS.—I have my doubts whether bees know what they want along this line, but accept the surroundings as they find them. It is their nature to seal up all cracks and holes not large enough for their exit or return, and this they will do, no matter whether in a tree or hive; but after seeing them prosperous in trees which had only a hole large or small at the bottom of their combs, and all the way from this to a crack large enough to put your hand in the whole length their combs occupied in the tree, I have concluded that they accepted things as they found them, as said above, without asking whether such were the best for them or not.

THE "BALLING" OF QUEENS.

QUES. 6.—"What is your remedy where bees ball a queen? Why do bees ball a queen of their own rearing, after all queen-cells have been destroyed, and they can have no hope of any other queen?"

ANS.—The last part of this is a mystery which I never could really solve. It is easy to say that, in opening hives, the bees fear that their queen is to be injured, so ball her for safe keeping; but I have known scores of instances where a virgin queen has been balled in coming home after meeting the drone, and at other times until they were killed, or nearly spoilt for future use, being led to the discovery that the queen was being balled by the general appearance of the colony at the entrance, such as an unusual commotion denoting queenlessness, or dead and doubled-up bees, having the appearance of being stung. Who can tell us why such balling occurs?

The remedy is the same as in introducing queens—that of caging them until the bees behave themselves, and are peaceably inclined toward them. Smoke the bees till they release the queen, then cage her and leave her till the bees pay no more attention to the cage than they do to any other part of the hive. When you find this to be the case, it is generally safe to let any queen out.

Onondaga Co., N. Y.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

MOTHS AND ROBBING.

"The only good bee-keeper is a dead one;" quoth Harry Howe, page 258. Come to think of it, it was not verbatim that he thus chuckt us into the proverb relative to the poor Indian—but it amounts to that, if neither robbing nor moths ever trouble the G. B.-K. Let's compromise, dear Harry, and put it that the evils of moth and robber are greatly mitigated by wise forethought, and by always being on hand in time.

A NEW WRINKLE—ROBBERS ROBBING THEMSELVES.

Few things take better in a journal than new wrinkles; and I think that we must credit Mr. Howe with quite a wrinkle in that he combats robbing (must be a shockingly bad bee-keeper) by keeping the robbers constantly employed at robbing out their own honey; heavy combs being continually taken out and carried to the robbing spot. Of course, this would not be practical where there are outside bees handy; but where it is practical it seems to combine an excellent sort of stimulative feeding with a clever device to keep rogues out of mischief. All the same, let's wait for our individual afterthoughts after we've tried it. He's right, that what honey we desire to feed thus *can* be exposed (discreetly), and no serious harm follow. It is a wise point that we should, if possible, avoid letting them realize that we have shut them out from plunder, or carried it off.

SAFE INTRODUCTION OF QUEENS.

Frank Coverdale's safe introduction is worth thinking of. A queen once O. K. in a nucleus, the nucleus can soon be made to absorb the most of any designated full colony. But it's tough on the queen just arrived from a long journey to make her wait two days more on the shelf; and mails and dealers are seldom regular enough to have things match exactly. Page 258.

THE CLUSTER OF BEES IN WINTER.

Out of W. G. Larrabee's excellent paper at the Vermont convention I cull the remark about the danger of getting the winter cluster establisht on nearly empty upper frames, while most of the honey is left in the lower frames—quite out of cold weather reach. Queens below, as much as may be, should be the rule. Page 261.

NIGHTBEE VS. THE NIGHTMARE.

It seems (page 262) that Mr. Holmes, who sleeps in his house-apiary occasionally, has at times experimented with the *nightbee* (sharp end first) as an improvement upon the nightmare. (No danger that money would make it go.)

QUEENLESS COLONIES IN HOUSE-APIARY.

It was shrewd to move in the weak colonies last, after getting them strengthed up with the obstinate bees that prefer an alien home near by to own home a little further off. I have seen bees in process of being moved show that same trait, even when moved only a few feet at a time. But 16 out of 29 is a sad proportion to go queenless in summer when young queens come on deck. We'll be excused from house-apiaries, if that ratio is to be the rule. Page 262.

DR. MILLER AND HIS "Q. AND A." DEPARTMENT.

And so Dr. Miller has encountered a man who thinks that the questions in the department of "Questions and Answers" are made up! Mist him that time. Accuse him of making up the answers, and see what he'll say then. When Mary told her dream her mistress smilingly accused her of being asleep when she dreamed it—which she indignantly denied.

BARRELS FOR HONEY A GRAND NUISANCE.

Right, you are, dear editor, about the barrel. The dealer who buys it and sells it again whole thinks it O. K., naturally; but to the retailer it is a grand nuisance. Quite a good few of us don't admire the job of taking the head

out of a barrel—and perchance *couldn't* put it in again properly—yet it is too costly a package to waste. Page 265.

BEES AND SORGHUM-MILLS.

Mr. Pierson's experience, on page 268, is pathetic. Still I think that on a pinch one *can* have an apiary and make sorghum too. Don't *plug* the entrances. A little labor and expense betimes will make each colony a nice front apartment of screen. Many years ago I ran a sorghum-mill one fall. We kept bees then, did not shut them up, took few other precautions, almost none, and had very little trouble. Orion Conger, page 283, finds bees unendurable only one year out of eight. Some other years he fought them off a little with smoke.

DANDELION TEA AN ENDURABLE INSULT.

Alas, alas! Our Dr. Peiro (progressive as he has seemed to us to be) is non-progressive enough to believe in some of the old gags. Insulting one's stomach regularly with dandelion tea actually does people good. Page 270.

NO LIKEE STINGEE SUGAR-FLY.

As I contemplate that poet yelling about a few stings, on page 281, it occurs to me to ask a question. Do we ever get sufficiently habituated to stings to *like* them? Some stings I decidedly don't like, including all the extra-severe ones; but still, I often find myself asking of myself, Does that hurt? or, Does it feel good? How is it with the other old chaps? Are any of them similarly affected? Better spring medicine than Dr. Peiro's dandelion tea, I believe.

NAILED SECTIONS AND A PORTLY DAME.

On page 275, Boomhower's charge on Doolittle for saying that the ordinary section breaks down, seems to indent his lines somewhat. When a case can fall ten feet, and smash the honey all up, without harming a section, it does seem as tho fair quality must be accorded to the latter. But it seems that that 200-pound, red-headed dame pusht back his own lines a few paces; and yet, with the help of the bees, he won out. Perhaps Doolittle may do as well;—still retain a sort of hopeless hankering after the nailed section myself, you see.

PROTEST AGAINST HONEY WASHING OUT.

In Lovesy's excellent article, page 273, I would file a protest where he says rain washes the honey out of alfalfa. If I am right, there is none to wash out—scarce a bee ever seen on it in any weather wet or dry, thru an extensive territory—and yet abundant honey-yield in the irrigated regions. It seems to be a sort of general rule that plants do not yield much honey except in regions where they specially prosper. Plants made to grow out of their natural habitat very rarely prove honey-producers.

DARK AND LIGHT HONEY-DEW.

Mr. Whitney's interesting problem about one colony gathering only dark honey-dew, and another only light, I would essay to solve thus: The dark supply began first, and those colonies that got to work on it strong kept at it. In some other colonies the main generation of bees were not old enough to gather till several days later, and they struck into the later and better supply. Of couse, *bees* don't consider honey any the worse for being dark; and their taste for flavors probably differs some from ours.

FORMULA OF BEES' BABY FOOD.

And so, Honey 2, Pollen 4, Water 1, is the recipe the bees follow for baby food, according to Doolittle's afterthink. Page 276.

A TRIMMING FOR TRIMBERGER.

"The loquacious paid writer," eh? Why, Mr. Trimberger, no judge will ever let you off from the charge of being loquacious, the way you sling English. But I guess you're right, that watery-looking honey is usually honey left uncared for in hot weather by the swarming of the bees. Not quite so sure that a hot, dry room will reclaim such honey; but perhaps it may sometimes. Certainly the acid will not counter-develop if souring has begun. Rather doubtful if cappings which have sunk to touch the honey can ever be made to leave an air-space. I was going to scold about those half-capt sections given to the minister; but I forbear. My last run of unfinist sections are apt to be dark and poor and raw; but where there is no fall harvest they may be much better—possibly as good as the minister's sermons. It is instructive to see a competent judge abandon the Taylor leveler for a better method. If it seals over empty cells, and they appear as blemishes in next year's honey, that is a drawback, indeed. Why has no one mentioned that before? On the whole, a convention seldom listens to so stir-up-ative a racket. Page 277.

PLANS TO HEAD OFF SWARMING.

Cutting out and throwing away the brood to head off swarming is remedial work with a vengeance, Mr. Lathrop—and job lots of it, if we examine each colony often enough to know just when to cut. And your nice frames of worker-comb will be changed to drone.

The other plan will bear more investigation. Had Mr. L. told us how many colonies, up to date, actually *have* been run in this manner it would have helpt on some. Page 278.

ALBINO BEES—POLLEN SUBSTITUTES.

Probably the albino bee is not a true albino, and so inferences of weak constitution founded on the name would be amiss. Page 285.

I conjecture that Mr. Presswood's flour and meal may be all right, only that the bees are waiting for a trifle of nectar, and more springlike weather. Page 285.

COGITATOR.

Report of the Chicago Bee-Keepers' Convention.

BY HERMAN F. MOORE.

[Continued from page 342.]

Dr. C. C. Miller gave a good talk on "Running an apiary for comb honey," after he had plenty of fun with the secretary about the article supposed to be lost in the mails, but which as a fact had been neither written nor mailed!

Mrs. N. L. Stow, of Evanston, the most experienced lady apiarist in our county, then read the following paper on the same subject:

Running an Apiary for Comb Honey.

I know that you do not expect any great amount of information, but only ask that I open the subject so that others may be induced to give their opinions. I shall not pretend to know just how an apiary should be run for comb honey, but would probably refer you to our bee-periodicals as an excellent source of information. With such good bee-literature as we have there is no excuse for ignorance; all that I know about bees has been learned by experience.

It is said that there is always something new to be learned about bee-keeping, so if I were to write an up-to-the-times essay I might tell you of many things that do not come in my experience; as my hives and fixtures were bought 15 years ago, the 10-frame hive made and sold by Mr. Thomas G. Newman at that time, you would probably call them out of date, but rather than to make kindling wood of them and give my good husband the further expense of buying more, I still use them.

In order that I may not take too much time, I will only touch upon the important points, as you follow, if you will make a mental note of such things as interest you, or that you can give or get information on, we can discuss them later.

Let us look at the subject and see what is involved in the question. There might be comparison, but I have no way of comparing, as I have never produced any other than comb honey. I judge it must mean more work, and at least closer attention than producing extracted honey, because I knew one who did all the work for his bees in the morning or evening, with an occasional holiday and perhaps Sunday; while I never dare be long away from home between the hours of 8 a.m. and 2 p.m., from the middle of May to the middle of July.

Wintering is a very important part of the subject, but that is a problem of itself, and properly comes under its own head. Locality is the same, but few of us can change our locality. Kinds of bees are more simple and easily controlled by the bee-keeper. Spring management is another part of the question, and also swarming, and hives, sections and section-cases, and last of all, selling; this part I like least of all, and gladly leave it to others.

Hives, sections, and cases are of most interest to the dealers I think, unless it is to the beginners, for it is worth while to start with the best, as hives and fixtures last many years. They may not affect the quantity of the honey produced, but they may affect the looks of the honey, and also the comfort in handling.

Having thus briefly disposed of a part of the subject, we have spring management and swarming to consider more fully. Supposing our bees to have been well wintered, and on the summer stands, the hives neatly arranged in rows, they should be inspected on the first day in spring warm enough for the bees to fly, or better, after they have had a good flight. The handling must be done quickly, as the bees having nothing to work upon now, may start to robbing, or if they are much disturbed they may ball their queen, and unless the day is quite warm the brood might become chilled. Usually it is only necessary to raise one or two of the outside frames to know the condition of the colony; it is better to do this early in the day so that the bees may have time to fly and get clustered again before the chill of the day comes on. If short of stores, frames of honey may be added, or candy put over the frames. The Hill's device may be removed now to keep the bees down on the brood, but the cushions should be left on. The entrances and floor of the hive should be cleared of dead bees, the entrance contracted, and then they should be left undisturbed until fruit-bloom, unless there is reason to think something is wrong. It may be profitable to put out rye or other meal for them to work on now, and water should be provided if not within easy reach.

In fruit-bloom I look them over thoroly, clip the queens if they are not already clipt, make a record of them, also the amount of honey and brood, and the general condition of the colony; remove division-boards, giving the full number of frames to the hive unless the colony is too weak to cover. The frames will contain honey if I have them; it is very necessary they should not be crowded, or short of stores now. Some years they will bring in honey all the spring, enough to keep up brood-rearing; they will gather from the bloom of the maples, elms, oaks, willows and locust, and from dandelions and fruit-trees, if the weather is right, but I have seen the time when they must be supplied up to June—not for stimulation, but to prevent loss of brood. This is the time when the bee-keeper must be alert and watchful; he should know exactly the condition of every colony; he should know every colony as he knows his own family, and he should build up the weak, supply the needy, note the queens whether prolific or not, and be able to distinguish between the good and bad traits that develop in the colonies, that when swarming-time comes one can be encouraged, and the other represt. If there are many colonies, we will need besides sections a section-press and foundation fastener, and the hives must be all ready for the swarms, cases filled to put on as soon as there is lengthening of cells, and everything ready ahead of time rather than behind, for seasons vary so much that there is often two weeks difference in the time of doing the same work. If swarms issue very early I hive them on a new stand, giving the swarm the full set of combs, but if swarming-time has really come, and honey is coming in, I hive them on the old stand, with the hive contracted, and prevent after-swarms by the Heddon method, or occasionally by shaking off some of the bees from the combs in front of the new hive, and cutting out queen-cells.

If late in the season, I return the swarm in some way to prevent increase, the object being to keep the colony as strong in bees as possible until the honey-flow is over. There is much in Mr. Doolittle's idea of getting the bees at the right time; the strongest colony in the spring may waste its energies in rearing brood and swarming, and be outstript in surplus honey production by its weaker neighbor, that with combs filled with brood just at the right time, are forced into the sections, and become so interested in honey-gathering that all its forces are kept busy and content.

Three section-cases to each colony, spring count, is usually enough for me for the season; the swarm may use two cases, and the old colony one. I usually put full sheets of foundation in for the swarms, and starters for the old colony. Contracting the brood-chamber during the months of June and July puts the white honey in the boxes, after that it is better to enlarge the brood-chambers and let the fall honey go into the brood-frames and secure young bees for wintering, and also save feeding. I have never failed to secure enough fall honey for wintering, so I try to get all the white honey in the surplus cases.

Before closing I must say a good word for the bee-escapes; they will pay for themselves in the comfort and ease with which honey can be removed from the hives. What was once to be dreaded becomes a pleasure thru their use.

It is impossible to lay down any set rules for the care of bees—one may have method and not be methodical, a system and not be systematic. So much depends upon the weather, season, and the condition of the colonies, that the plan that works well at one time, and even many times, may under slightly different conditions over which the bee-keeper has no control, and of which he may not be aware, result in a most disastrous failure. The bee-keeper must be competent to judge of what is best to do under varying conditions, or go slow until experience—the best of teachers—shall give him wisdom to decide.

MRS. N. L. STOW.

Then after some discussion of this topic, an adjournment was had at this point until 1:30 p.m.

AFTERNOON SESSION.

The first subject on the program was "Queen-Rearing for Small Bee-Keepers," by Mr. E. R. Root, who was expected to address the meeting, but failed to put in an appearance, owing to press of spring work. Mr. John Bodenschatz then read a paper on the subject, as follows:

Queen-Rearing for Small Bee-Keepers.

As the future of our colonies depends upon the prolificness of the queen we must endeavor to rear such queens from colonies that are noted for their prolificness, endurance and gentleness.

Take two colonies side by side in the same style of hive, of equal strength, and note results. You will find that one will produce nearly twice as much honey as the other. Why this is so is quite difficult to explain; altho the queen may be a good layer, and keep the hive crowded with her offspring, their honey-gathering and endurance may be lacking.

It is very important to improve our stock by rearing queens from the best colonies for increase of colonies, also to replace inferior queens. To do this, select several of the best colonies, one for the production of drones and the rest for the production of queens. The colony which is selected for the production of drones must have a very prolific queen, and workers famously noted as honey-producers. Place alternately two or three drone-combs in the center of the brood-chamber; about the middle of April, or near May, stimulate by feeding; by so doing we will have early drones from select stock. At the same time keep all drone-comb out of the inferior colonies.

To rear good queens stimulate by feeding, beginning in early spring so as to have the colonies in good condition by fruit-bloom. As we are aware, our best queens are reared thru the swarming-fever; this is because the brood-chamber is crowded with bees, to keep the combs warm, honey and pollen being plentiful, and large numbers of young bees emerging daily, which act as nurse-bees.

Having selected the colonies from which to rear queens, remove two or three frames of brood, replace with empty worker-comb. Look these over daily, and as soon as sufficient eggs are deposited in them, which should not exceed three days, place these combs alternately in a strong colony which was made queenless a day previous. Take out most of the unsealed larvæ, contract if possible, also shake the combs containing young bees from other colonies in front of this queenless one. This will give an ample number of nurse-bees.

In about eight to nine days after furnishing the eggs to the colony made queenless, count the number of available queen-cells, make preparations for forming nuclei, and replacing queens accordingly. The same day destroy the queens from such colonies as are worthless. The next day, with a sharp penknife, cut out the queen-cells with a small amount of comb adhering. Care must be taken so as not to injure the queen-cells.

To introduce a cell into a colony made queenless the previous day, insert it into its natural position between two combs in or near the center of the brood.

For forming nuclei place in an empty hive, two combs containing brood in all stages, place the queen-cells between these two combs, add more empty combs and contract, also shake the bees from other colonies in front of the nuclei.

After these nuclei are formed, care must be taken so the queens will not get lost on their wedding flight. There must also be a contrast between these nucleus hives; this

can be done by placing boards in different positions in front of the nuclei.

It sometimes happens that the honey-flow slackens; great care must now be exercised with these small colonies, as the strong colonies will make it their business to hunt up the weak ones and deprive them of their stores.

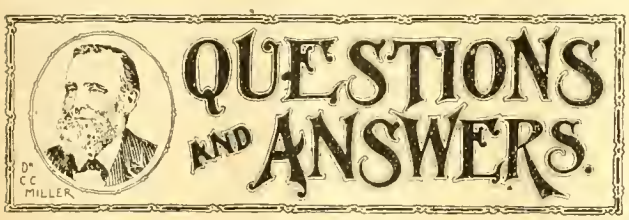
When little or no honey is coming in, feeding must be resorted to; this must be done in the evening, the entrance contracted, and not a drop of honey left lying loose in the apiary.

It will also be very difficult to have over two-thirds of the queens fertilized.

Good queens can also be reared from a colony that has sent forth a swarm, but this should be discouraged as much as possible. I believe that in time to come the swarming habit can be bred out, and a non-swarming race establisht.

JOHN BODENSCHATZ.

After discussion the next topic on the list was "Running an Apiary for Extracted Honey." There was not much discussion of this topic, owing to lack of time. The most interesting and entertaining feature of the day's program was the question-box, which was opened in a most interesting and effective manner by Dr. C. C. Miller. After this an adjournment was had to the first Thursday in June, 1899.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

(The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Hiving Swarms in Shallow Boxes.

H. Lathrop's plan (page 278) of hiving swarms in shallow bodies looks quite well to a novice. I wonder if there will not be considerable swarming out from a brood-chamber of this size. What is your opinion? OREGON.

ANSWER.—In Mr. Lathrop's locality I think there will be very little trouble from swarms issuing from the small hives in which the swarms have been put. If there should be a continuous harvest till late in the fall it might be a different thing. In any case there will not be the same danger of swarms that there would be if bees wintered in such hives.

Bees After Salts, Probably.

I notice quite a number of bees all the time around where urine is put. What do they gather there? MD.

ANSWER.—Probably salts contained therein. Some make a practice of keeping the bees supplied with drinking-water slightly salted, and it is probably a good thing.

Limiting Swarming—Best Size of Hive.

1. I keep a few colonies of bees, which swarm too much. Can I stop that? If so, how?

2. What size hive do you think is the best? OREG.

ANSWERS.—1. You can probably limit them to one swarm each. When the prime swarm issues, set it in its new hive on the old stand, putting the old colony close beside it. A week later, set the old hive on a new stand at some distance, moving it at a time of day when the most bees are flying. The field-bees will return to the swarm, and so weaken the old colony that it will not be likely to swarm again.

2. That's a very difficult question to answer, and you will do well to read over all that has been said about it in past numbers of this journal, for much has been publisht. If you give the closest attention to your bees, it may be that the 8-frame dovetailed hive, either one-story or two-story, may be best, but a larger hive, and perhaps a larger frame, may be better for bees that are left without much attention.

Bees Outside the Hive and on the Ground.

The alighting-boards are covered with bees all the time; they remain out over night, and if it rains they make no attempt to go in. They are crawling on the ground for several feet around the hive, and seem to be too weak to fly. The honey in the hive is candied. They have been acting so only for a few days. It has been very wet and cold for bees this spring. IDAHO.

ANSWER.—From the description it appears very like a case of starvation. Possibly the bees had workt all the liquid part out of the honey, and it was so cold they could not fly out for stores. Still, it seems that in a wet time they might have gotten water enough to use the granulated honey. If the bees were swollen, shiny, and trembling, it was paralysis.

Making Honey-Vinegar—Old Combs of Honey.

1. I have a few bits of broken combs, honey and cappings of last fall's extracting, and as I will have more at different times, I wish to know how to work them into vinegar as they accumulate.

2. I have a few frames of sealed honey of last year's gathering, so thick that I cannot extract it without breaking the combs. How would you use it, or what is best to do with it? I wish to save the combs if possible. MINN.

ANSWERS.—1. Put them into a crock, cover with water and let soak a few days (no harm if a few weeks), then drain off or strain out the liquid, and let it sour as you would cider.

2. Perhaps the best way, if you want to save the combs, is to spray or sprinkle with water, then give to the bees to clean out, wetting again if necessary.

Bees from the Public Road—Size of Dadant-Langstroth Hive.

1. How far must bees be put from the public road?

2. What hive is the Langstroth-Dadant hive? ILL.

ANSWERS.—1. So far as any law is concerned, I think there are not many places in this country where there is any legal restriction as to distance. If bee-keepers are wise, there never need be any. Every one should put his bees so far from the road that there need be no sort of danger to passers-by. If a high fence is between the bees and the road, they may be put close to the fence.

2. I think the Dadants do not have any special Langstroth form. They use mostly, if not altogether, the Quinby hive, which has frames 18½x11¼.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

The Premium offered on page 254 is well worth working for. Look at it.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR. SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., E. Whitcomb; Vice-Pres., C. A. Hatch; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,

15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JUNE 8, 1899. NO. 23.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Comb Honey 1820 Years Old.—Mention is made in the British Bee Journal of relics from the ruins of Pompeii, now in the public museum at Naples. Loaves of bread, also figs rather shriveled, and pears certainly no longer juicy. "But perhaps the most interesting relic in the room is a honey-comb, every cell of which can be distinctly made out. It is so well preserved that it is hard to realize that the comb is no longer wax, nor the honey, honey. A piece of the comb seems to have been cut out, and one can imagine some young Pompeiian having helpt himself to it and sitting down to eat it, when he had to jump up and fly for his life. One cannot help wondering what became of the piece—whether the young fellow took it with him and ate it, or whether he left it on his plate, intending to return for it when the eruption was over."

Rate of Fare to the Philadelphia Convention.—We received the following communication from Secretary Mason just a little too late for our last issue:

STA. B, TOLEDO, OHIO, May 25, 1899.

EDITOR AMERICAN BEE JOURNAL.

I've been wondering what kind of an animal you take me to be, anyhow. On page 296 I corrected the statement made in your quotation from the Chicago Record as it appeared on page 264, and in your comments you say of the Record, "And it may be they are not so far wrong as they might be." Of course, a person doesn't have to be an editor to know that, but sometimes there is quite a difference between "one fare for the round trip" and two-thirds of that amount. And then, you say, "at any rate there is plenty of time yet to announce the rates.....The important thing for bee-keepers to do is to begin now to arrange to be in Philadelphia," etc. Well, now, if railroad rates are not *the* "important thing," I wish "ye editor" would just post "your humble servant," and the rest of your readers, as to what "the important thing.....to arrange" for is, and we'll try and get down to business.

If it is not important to know about rates there may be plenty of time yet, but if rates *are* important (and who doubts it?) the sooner we can know about them the better. It's now too late to get a notice in the June bee-papers, and it's possible we may not know the rates in much of the territory covered by the Association in time even for the July journals.

I have corresponded with all of the passenger associations—six in number—and up to May 17 two only had fixt the rate of fare—the Central Passenger Association and the Trunk Line Passenger Association. The New England, Southeastern, Southwestern, and Western Passenger Associations had not fixt rates, but it is probable that the New England Association will fix the rate at one fare for the round trip.

When I sent the communication that appears on page 296, I *thought* I was doing your readers (if not *you*) a favor, and the same thought calls this out, but if you've any more reliable information than I, please give it, as it may be needed, but don't give us "maybe's," for they "may be" misleading.

A. B. MASON,
Secretary United States Bee-Keepers' Association.

Well, Doctor, we fear you are borrowing trouble. Did you ever know the G. A. R. to fail to get good railroad rates to their annual encampments? We never did.

Of course, the railroad rate is a *very* important thing—especially to some of us editors who have to go nearly 1,000 miles to the convention. But we expect to be satisfied with whatever rate the G. A. R. secures, for we feel pretty certain it will not be over half as high as the rate bee-keepers alone could possibly get.

Don't you get weary in well doing, Doctor. Just keep on sending your "favors" this way, and we will try to appreciate them. But don't get discouraged when we are trying to help things along, even if our little help doesn't help very much. You see, we'll have a lot of time to learn yet, if we should be blest with as many years as you have lived to enjoy. And may you be with us many years more.

Spring Management of the right kind, says Editor Hutchinson, in the Bee-Keepers' Review, is the foundation of our honey crop. Colonies sometimes starve in the spring, or are greatly weakened or retarded in breeding by a lack of stores. Mr. H. G. Sibbald, of Ontario, puts combs of honey outside a division-board, and has it so arranged that the bees can have access to these combs. This removes all danger of starvation, and greatly encourages the rearing of brood. At the end of the fruit-bloom he puts the outside combs of honey in the center of the brood-nest—first one, and then in three or four days the other. He scratches the surface of the combs. This plan converts the early dark honey into bees.

Talking Bees to School Children.—The following item appeared Saturday, May 27, 1899, in The Chicagoan—a local weekly newspaper publisht in the suburb of Chicago where we live:

"A rare treat was given to the eighth-grade pupils of the McPherson school last Thursday afternoon, when Mr. George W. York, editor of the American Bee Journal, gave them an illustrated lecture on bees. The pupils were delighted, and the way Mr. York described the simple animal was truly wonderful."

The only excuse we have to offer for reproducing here this appreciated notice, is to suggest that bee-keepers in other cities will find the school children greatly interested

in a talk on bees if given a chance to hear it. We had a Langstroth frame of bees in a glass hive, and gave therefrom a practical illustration of the work of bees in the hive. On the comb were worker-bees, drones, and a queen. There were capt worker-brood, drone-brood, and the beginning of a queen-cell. In the open cells were honey, eggs, larvæ in various stages of development, and pollen.

We also had a chart illustrating the development of bees, and some other things in relation thereto.

Mrs. Lane, the efficient teacher in the eighth grade of the McPherson school, had invited us to visit them and give the bee-talk, expecting to have the pupils take notes and write out afterward as much as they could remember of what we said. The best reports were then to be publisht in their little school paper. It made a splendid written exercise for the pupils, and the talk seemed greatly enjoyed by them, many asking a number of questions, which showed that they were much interested.

Live bees in a glass hive are always interesting even to people who are far beyond their school-days.

Preventing Swarming.—This item, copied without note or comment in the Australian Bee-Bulletin from the New Zealand Farmer, makes one wonder whether bees are so different on opposite sides of the globe, and whether bee-keepers are so much more skillful on that side:

"There is only one way of absolutely preventing swarming, and that is to take out every frame in the lower story at least once in every seven days, and destroy every queen-cell that the bees may be building. The job, to many, may seem a tedious one, but it is really very little trouble. An expert bee-keeper ought to be able to take out each of the ten frames and destroy every cell in about five minutes."

Destroying all queen-cells once a week will hardly prevent swarming if bees sometimes swarm with no queen-cells present; and the man that can handle each comb and miss no queen-cells when averaging only 30 seconds to a comb must be expert indeed. But sometimes those who write for agricultural papers about bees are more theoretical than practical.

Bee-Keeping in Chili.—Gleanings recently contained the following paragraph referring to an article which appeared lately in the American Bee-Keeper:

An interesting letter from Chili, by the editor of the Chilian Bee Journal, is given, together with a picture of the writer, Mr. Lafitte himself, and two Chilian apiaries. His journal comes here, and I have noticed with much pleasure the excellent and progressive qualities of it in every respect. He says the general aspect and climate of Chili are especially adapted to bee-keeping. Some of the farms cover 40,000 and some 80,000 acres, and some are 30 or 40 times as large as that. There is an enormous consumption of wax there for tapers in the Roman churches. One of the largest apiaries consists of 700 frame hives, 400 of which are of the Dadant-Blatt system, and about 300 of the Langstroth-Simplicity style. These 700 hives are divided into five apiaries about two miles apart. So far as harvests are concerned, 110 pounds per hive is the most that has been extracted. This was an apiary of 100 Dadant-Quinby hives. Deep frames are inconvenient in a climate like that of Chili.

Getting Queens from Italy by Mail is reported a success in Gleanings. The A. I. Root Co. send to the Italy breeders queen-cages prepared with Good candy and sealed honey, all ready to put in the bees, and out of a dozen queens sent ten came thru alive, but one of the ten was weak.

Cuban Bee-Keeping is Expensive, according to Gleanings, as the hot climate makes sheds almost imperative, and they cost a good deal of money.

Getting Bees Started in Sections.—Editor Hutchinson speaks approvingly of the plan of first putting on extracting-supers, and Editor Root advises that the experiment be tried of putting on a shallow extracting-super, and then when the bees are fully at work taking away the extracting-super and putting on a super of sections.

Mr. B. Walker, of Osceola Co., Mich., has been in Tennessee for several weeks buying carloads of bees—475 colonies in all. He is sending them into Michigan, where he runs some ten apiaries every year.

* * * * *

Dr. A. B. Mason, of Lucas Co., Ohio, Secretary of the United States Bee-Keepers' Association, writing us May 25, reported thus concerning the weather and his bees:

"This is the first real, nice day for bees since the nice weather we had in April, but there are no blossoms for them to work on. I have full supers on several hives, and half supers on most of the others—not for storing honey, for there is none coming in, but to give room for the bees; but to-day I notice that nearly all the honey has been carried from the brood-nest into the supers, and the brood-combs are full of brood."

* * * * *

The Humane Alliance, New York (50 cents a year), is a popular and interesting magazine devoted to animals and pets and humane education. The May number is remarkable for its fine illustrations and the great amount and variety of interesting matter in relation to animals. It also says that there is one subject on which every dictionary, encyclopedia, natural history and zoology is in error; that is, where the subject is treated fully. It is strange that this error is in the description of one of our native American animals, the armadillo, of which little seems to be known, tho this animal is likely to become a valuable pet.

* * * * *

Mr. W. A. Pryal, of Alameda Co., Calif., writing us May 15, had this to say:

"Mr. Pender, of Australia, arrived in San Francisco Saturday morning from his eastern trip; he stopt at Los Angeles and saw Mr. Martin. He reports the country very dry in the southern portion of the State. He called on me Saturday evening. I askt him to take dinner with me Sunday, and he did so. I drove him about Berkeley, and showed him over the grounds of the State University, and also thru the grounds of the institution for the deaf, dumb and blind, which is also at Berkeley. He'll replenish his cages with young bees at my place to-morrow, and the next day he takes the steamer for Australia."

* * * * *

Mr. R. McKnight, for years a prominent bee-keeper of Ontario, Canada, has a most beautiful home, as is shown by the two nice pictures in the May Bee-Keepers' Review. He says this in reference to it:

"The grounds embrace about 4¾ acres—and they are admitted, I believe, to be the finest site in town. They cost me $10,000. When Mr. Hooker, of London, was staying with me during the Chicago Fair, we were one evening sitting on the rustic seat in the distance, when he declared he had witnest no finer prospect in all his travels in Europe. Mr. Cowan was also much taken with the situation. Mr. and Mrs. Cowan stopt with me for ten days during their first visit in 1887. My apiary was located in the orchard, which lies behind the house, and inside the row of evergreens shown here. I have occupied this place for 23 years, and laid out the grounds, planted all the trees, shrubs, hedges, etc., which are now, like myself, getting old. I fear that my bee-keeping correspondence is about over. I have no bees at home now; not being able to attend to them. I still have an apiary about 15 miles from here; but I do little in it personally."

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We believe we have won the esteem and confidence of our shippers thruout the country, and that our dealings, as a rule, have been of the most pleasant nature.

Our additional capital will put us in position to increase our already large business still farther, if possible, and at the same time enable us to treat our shippers even more liberally than heretofore, in making advances, etc.

Records will show that we handle by far the bulk of all the honey sent to our market. We make honey the principal part of our business, are personally acquainted and have trade connections all over the country, which enable us to handle any amount of honey to better advantage than any other house.

Old shippers know us and will bear us out in what we have said. Those bee-keepers who do not know us and have had no dealings with us, we would cordially invite to correspond with us and make our acquaintance. We not only handle on commission but buy largely as well, from small lots to carloads, for spot cash.

We wish to call the attention of the Southern bee-keepers to the fact, that our market never was in better condition than this season. Old stock is disposed of and the market is bare, with a good demand. New crop will find ready sale and at higher prices than have ruled for years past. We would advise them to send their honey, while there is a good demand at good prices, as later on conditions of the market may change.

We also handle **MAPLE SUGAR AND SYRUP** very extensively, and would be pleased to hear from those having any of these goods to offer.

In conclusion, we wish to extend our thanks to all of our shippers for their past favors, and trust to receive their kind consideration in the future.

21A4t Please mention the American Bee Journal.

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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PURE ST. BERNARD PUPPIES CHEAP. 6 weeks old. H. S. JONES,
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In the multitude of counsellors there is safety.—Prov. 11-14.

Best Use for Empty Combs.

Query 91.—In case you had 150 or 200 nice, straight, empty worker-combs, bad 50 or 60 colonies of bees, desired as little increase as possible, and was producing mostly comb honey, what, in your judgment, would be the best and most profitable way to use those combs?—HOOSIER.

W. G. Larrabee—I should use them for increase.

Mrs. L. Harrison—Use them for extracted honey.

E. France—I would put the combs with bees enough to work them.

Eugene Secor—Melt them into wax, and trade for foundation to use in sections.

Adrian Getaz—If the combs are white, cut them up and fit them in the sections.

Dr. A. B. Mason—I would use them in supers with the colonies I run for extracted honey.

P. H. Elwood—Make enough increase to cover the combs, and unite in the fall or spring.

E. Whitcomb—Sell them to some enterprising fellow who produces extracted honey.

Mrs. J. M. Null—I do not know of any use except in the way of increase, which *I* should desire.

G. M Doolittle—By "pruning" out the 150 to 200 poor combs that may be found in

Extracted Honey Wanted

As soon as you have any good, well-ripened Extracted Honey for sale, send us a small sample, stating quantity, price expected delivered in Chicago, and how put up. Prefer it in 60-pound tin cans. Expect to be able to place carload lots as well as smaller shipments of Extracted Honey. But don't ship us any until we order. Address,

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your 50 or 60 colonies, and using the "nice, straight, empty worker-combs" in their places.

J. M. Hambaugh—Breed up your bees before the harvest. Populous colonies will produce the honey.

Dr. C. C. Miller—They could be used for increase, for extracting, or to give extra room before and after the harvest.

Rev. M. Mahin—I would substitute some of them for any crooked or defective combs in the 50 or 60 colonies. The rest I would melt into wax.

Chas. Dadant & Son—Use a part of them to exchange for whatever drone-comb might be in your colonies, and hive swarms on the balance.

Dr. J. P. H Brown—I would use them to the best possible advantage in the "little increase," and to replace bad comb in the other colonies.

R. C. Aikin—For extracting. If no increase, what else can you do with them? If you can use it that way, have them filled for use in feeding.

Jas. A. Stone—I should make up my mind to go into extracted honey, and use them above queen-excluders; or else I would make them into beeswax.

J. E. Pond—Sell them for the best offer you can get. I assume, however, that your colonies are all amply provided with combs, and that these are extra and not needed.

Emerson T. Abbott—Let the bees swarm, and hive the swarms on the old stand on the combs, and give the swarm plenty of surplus room at once. Move the old hive away.

O. O. Poppleton—Unless there are strong reasons why you should not increase your production of extracted honey, you might do that. Such combs would be of much value used that way.

Prof. A. J. Cook—Melt up the poorest ones—those with drone-cells and not straight—which would not be required. But why not increase? If one is keeping bees why not utilize all the combs?

C. H. Dibbern—That would depend a good deal upon the season. If the prospect for surplus was good, I should do all that I could to keep back swarming, but should use up those combs to some extent for hiving swarms.

A. F. Brown—If I do not want increase I should use the combs over a few colonies and run them for extracted honey. It is presumed you have already replaced all drone combs in your colonies, and have these combs left over.

C. Davenport—First, if there were any ill-shapen or drone-combs in the hives occupied I would replace them with some of those straight worker-combs. Here, in an ordinary season, what increase could hardly be avoided from that number of colonies would use up the rest, or all of them.

G. W. Demaree—I should use them to catch the fall flow of honey, because at that time of year, in my locality (Kentucky), bees do not succeed at comb-building. But if I lived in a locality where there was no fall bee-pasture, I would render into wax the inferior combs, keeping the best for any emergency.

D. W. Heise—If little increase is desired, and mostly comb honey is to be produced, and if the 50 or 60 colonies are already supplied with as good combs as the empty ones are, I would sell my surplus combs. Failing to secure a price equivalent to the value of the wax that said combs contain, I would melt them up, and use or sell the wax.

Mrs. A. J. Barber—I should hive my swarms upon them, putting four to six into the new hive at the sides; fill up the middle with new frames with one inch starters. Put the hive that cast the swarm to one side, and when others swarm pile them on it five or six high. This will make a fine colony before winter, and does not increase much.

R. L. Taylor—I should use them first for the extracted honey so far as needed, then

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	5lb	10lb	25lb	50lb
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t 44A26t Please mention the Bee Journal.

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2-frame Nucleus with Untested Queen, $2.25.

Untested Italian Queens, 65 cents each. Ready May 1, 1899. Have orders bookt now, and get bees when wanted.

F. J. GUNZEL, Obear, Craighead Co., Ark.

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BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

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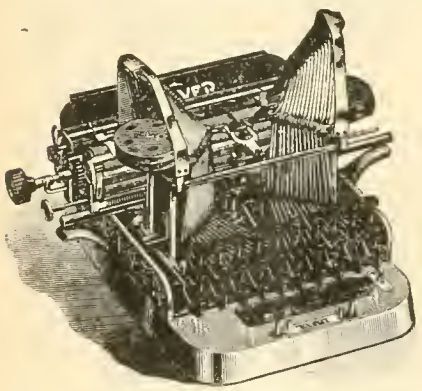
The Oliver Typewriter.

IT TOOK 25 YEARS to find out that typewriters have been built up-side-down. The OLIVER is built right-side up, where the WORK IS IN SIGHT.

THE OLIVER IS POPULAR because it is an up-to-date typewriter, not in the Trust, and because it SHOWS EVERY WORD AS YOU WRITE IT.



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HARPER BROS., New York.
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Send for Catalog.... **Oliver Typewriter Company,** N. E. Cor. Washington and Dearborn Sts. CHICAGO, ILL.

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Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf **AUGUST WEISS, Hortonville, Wis.**

use some for honey to furnish stores of such colonies as needed them, and for feeding next spring, and the rest for swarms, giving each swarm but two or three in the the center of the brood-chamber, or if more had to be given to use them all, restrict the brood-chamber to the size of five Langstroth frames.

E. S. Lovesy—If I were in your position, with a desire as you express it, I would divide the bees just enough to take the swarming-fever out of them, then I would take about 10 colonies and run them three stories high for extracted honey, using those combs for all they would be worth. Then I would run the remainder for comb honey. Of course, a good honey-flow would be the main condition to success.

S. T. Pettit—I would put the first swarms upon them until about two-thirds of them were used in that way, then in 10 days after hiving remove about one-third of the combs. Take those containing the youngest brood, and then fill up with empty combs. Those combs of brood can be used in different ways. Or I would hive swarms upon them in contracted brood-chamber, and in ten days remove the dummies spread the brood, and insert empty combs. Every swarm thus treated will render good service.

GENERAL ITEMS

Bees Doing All Right.

My bees are doing all right at present, but they had a hard winter. I lost 5 colonies out of 32. They are booming now. I had my first swarm to day (May 22). Nearly all the bees are dead in this part of the country. There is a good outlook for a honey-flow here this season. It has been cold for a few days, but it is warming up now. H. MESSER.

Greene Co., Pa.

A Destructive Hailstorm.

We have just had one of the most furious hailstorms in this locality ever known. The hails were not of such unusual size, but they came with such force and so many as to make it quite destructive. Bark was knockt off of young trees, and the marks of hail are plainly visible on the bee-hives. Some of the farmers are plowing up their wheat to add a "buck" thereto, so bees will fare all right in the fall.

H. G. QUIRIN.

Erie Co., Ohio, May 31.

Hard on the Farmer or Producer.

EDITOR YORK:—I desire to thank you many times for publishing the article by G. M. Doolittle, entitled, "Prices of Honey not Made by Law(?)." I have often wondered if it could be possible that no one of the many able writers and thinkers of the Bee Journal knew the real cause of the decline of prices, not only in honey but in everything else. I could hardly believe it, when I saw that Dr. Miller when askt the cause of declining prices of honey, wiggled out of it by practically saying, "I don't know."

I do not wish to set myself up as a teacher, or anything of the kind, but it is so simple to my mind that I think surely our great bee-keepers could easily give us the reason. A system that will allow the producer only a small portion of the value of his product cannot thrive and exist any great length of time—it will surely work or bring forth its own downfall, for if the producer gets only a small portion of the value of his product, he cannot then buy what he really needs, and there being taxes, rents and interests (besides the profits that the other fellows get) to pay, he does without a great many things that are necessary to make life pleasant. A system that produces million-

Van Deusen Thin Foundation.

We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

THE A. I. ROOT CO.,
118 Michigan Street, - CHICAGO, ILL.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

ADEL BEES Are not Italians; they are GOLDEN CARNIOLANS — and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

HENRY ALLEY,
21A3t WENHAM, ESSEX CO., MASS.

Please mention Bee Journal when writing.

PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

Please mention Bee Journal when writing.

Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address

Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.

aires and paupers is surely not a just one. A system that causes the toilers and laborers to go hungry, and causes those who do no real labor at all to get immensely rich, is by no means in accord with the teaching of Christ. A system that will cause little, innocent children (who have never wronged any one) to go without food, clothing and shelter, when others not a whit better have all the luxuries that human mind can devise and make, is certainly very unjust, and will not forever be tolerated by a just God and a civilized people.

It almost makes my heart bleed when I see little children go barefooted, and with an almost empty stomach, whose parents have toiled by night and by day and are unable to provide for their dear ones. To me it is hard to see how a Christian people can stand idly by and let such a condition of affairs go on unhindered. If we all got what we justly earn, the editor would not have to wait for months and months for the money due him for his paper, but when it is toil, toil, toil, by day and by night, and not get enough to have a decent place to live, and good food and plenty of it to eat, and good clothes to wear, it is hard to find enough spare cash to pay for a paper, altho we desire very much so to do. Always hoping for better times, but finding that the rent or interest and taxes increase but wages go down, and the price of what we produce seems to get less and less, and the times get harder. F. H. JOHANNING.
San Bernardino Co., Calif., May 7.

Did Well on Fruit-Bloom.

I have 6 colonies of bees in good shape. They did well on fruit-bloom, and have built up strong for white clover, this being our main stand-by for honey. It has been cool the last week, with a good show for frost. We had a hailstorm the 17th; there was hail bounced off my bee-hives as large as hen's eggs, leaving their marks on the roof, and calling the bees out to see what was the matter.

The winter loss was heavy here, and in

Northern Queens.

IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queen, $3.00 each; the same with untested Queen, $2.25. Ready to fill orders by June 1. Correspondence solicited. **MATE WILLIAMS,**
20A4t NIMROD, Wadena Co., MINN.

Please mention Bee Journal when writing.

LOOK AT HIS TEETH.

Don't take the Auctioneer's word, but look in the horse's mouth. **Page Fence** is fifteen this spring, has "good wind" and not a pimple. It's "standard."
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

40 PAGE CATALOG BEE-KEEPERS' SUPPLIES, Instructions to Beginners, &c., free.
JOHN NEBEL & SON,
5Atf HIGH HILL, MISSOURI.

Don't Rent

ESTABLISH A HOME OF YOUR OWN

Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

THE G. B. LEWIS CO'S

BEE-HIVES AND SECTIONS

Are Models of Perfection.

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This is the Verdict of Thousands of Customers and the Acknowledgment of Competitors.

Our unrivaled facilities, coupled with twenty-five years of manufacturing experience, enable us to anticipate and supply every want and need of the bee-keeper, promptly and accurately.

YOU WANT THE BEST—They Cost No More.

A copy of our Catalog and Price List mailed free upon application.

Factories and Main Office: Watertown, Wisconsin.

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L. C. WOODMAN, Grand Rapids, Mich.
FRED FOULGER & SONS, Ogden, Utah.
SMITH'S CASH STORE, San Francisco, Cal.

Superior Stock.

Every bee-keeper who has had experience with several strains of bees knows that some are far superior to others—that there is scrub stock among bees, just as there are scrub horses, cattle, sheep and poultry. Let me give my own experience:

Years ago, while living at Rogersville, I made a specialty of rearing queens for sale. Before engaging in this work I bought Italian queens and Italianized, not only my own bees, but all within 3 miles of my apiary. In buying those queens I think that I patronized nearly every breeder in the United States; and even in those years of inexperience I was not long in noting the great difference in the different strains of bees. The queens from one particular breeder produced bees that delighted me greatly. They were just plain, dark, 3-banded Italians, but as workers I have never seen them equaled. They seemed possest of a steady, quiet determination that enabled them to lay up surplus ahead of the others. Easier bees to handle I have never seen. It sometimes seemed as tho they were too busy attending to their own business to bother with anything else. Their honey was capt with a snowy whiteness rivaling that of the blacks. In addition to these desirable traits must be added that of wintering well. If any bees came thru the winter it was the colonies of this strain. They came as near being ideal bees as any I have ever possest.

All this was 20 years ago; and several times since then I have bought queens of this same breeder, and I have always found this strain of bees possest of those same good qualities—industry, gentleness, and hardiness. In addition to this they cap their honey as the blacks do theirs. I have frequently corresponded with this breeder, and with those who have bought queens of him, and I am thoroly convinced that he has a strain of bees that are far superior to the general run of stock. If I were starting an apiary, for the production of honey, I should unhesitatingly stock it with this strain of bees.

This breeder has always advertised in a modest, quiet, unassuming sort of way, nothing in proportion to what the quality of his stock would have warranted, and at last I have decided that I can help him, and benefit my readers, at a profit to myself, by advertising these bees in a manner befittingly energetic.

The price of these queens will be $1.50 each. This may seem like a high price, but the man who pays it will make dollars where this breeder and myself make cents; and when you come to read the conditions under which they are sold, it will not seem so high. The queens sent out will all be young queens just beginning to lay, but, as there are no black bees in the vicinity, it is not likely that any will prove impurely mated. If any queen SHOULD prove to be impurely mated, another will be sent free of charge. Safe arrival in first-class condition will be guaranteed. Instructions for introducing will be sent to each purchaser, and if these instructions are followed, and the queen is lost, another will be sent free of charge. This is not all: if, at any time within two years, a purchaser, for any reason WHATEVER, is not satisfied with his bargain, he can return the queen, and his money will be refunded, and 50 cents extra sent to pay him for his trouble. It will be seen that the purchaser runs NO RISK WHATEVER. If a queen does not arrive in good condition, another is sent. If he loses her in introducing, another is sent. If she should prove impurely mated, another is sent. If the queen proves a poor layer, or the stock does not come up to the expectations, or there is ANY reason why the bargain is not satisfactory, the queens can be returned and the money will be refunded, and the customer fairly well paid for his trouble. I could not make this last promise if I did not KNOW that the stock is REALLY SUPERIOR.

I said that the price would be $1.50 each. There is only one condition under which a queen will be sold for a less price, and that is in connection with an advance subscription to the Bee-Keepers' Review. Any one sending $1.00 for the Review for 1899 can have a queen for $1.00; that is, I will send the Review for 1899 and one queen for $2.00. Of course, this special offer is made for the sake of getting the Review into the hands of those who are unacquainted with its merits.

Orders for these queens will be filled strictly in rotation—first come, first served.

W. Z. HUTCHINSON, Flint, Mich.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.

many cases was the fault of the bee-keepers, in my estimation. I think if they would read good bee-literature instead of trusting to their own superstitious ideas often, and put to practice what they learn, they would profit by it. Success to the Bee Journal. P. W. GREEGOR.

Wayne Co., Ohio, May 22.

Good Prospects for Honey.

It has been very severe on plants and trees, but white clover has stood it all right, as the whole country seems covered with it, and also the clover of last season's seed is coming up thick. The prospects are good for a fine crop of honey. My bees have begun swarming—the first swarm issued May 8, which I think is pretty early, as bees came out of winter quarters rather weak, and a great many died this spring.

E. A. DONEY.

Scott Co., Iowa, May 25.

Honey-Dew—Bees in Fair Condition

EDITOR YORK:—Enclosed you will please find a clipping from the Farm Journal, in which a man offers $5.00 for one pound of honey-dew from aphides. I think Prof. Cook ought to get after that fellow and collect the reward.

Bees are in fair condition. I put 149 colonies into the cellar Nov. 25, 1898, and took them out April 10, 1899. They dwindled down, and I have doubled up to 129 colonies. Prospects are for a good season.

La Crosse, Wis., May 8. C. F. LANG.

[The item on honey-dew, referred to by Mr. Lang, reads as follows:—ED.]

HONEY-DEW.

I make no great pretentions to knowledge, but having lived all my life in the woods of southern Indiana, I have had a chance to learn something of this much-talkt-of honey-dew, and I am free to take the ground that there is no such thing, and I will give any man five dollars on receipt of one pound of honey that can be proved to have been gathered from deposits of aphides.

Next summer, say the last of June or during July, when the weather is warm and moist, what is generally called splendid growing weather, take a trip out into the woods in the afternoon, climb up into an oak, hickory or ash tree and examine the leaves, and you will find small particles of a dried substance on the leaves. Be sure to have a glass with you, and you will find a small rupture on the top side of the leaf, showing that the substance dried on the leaf has exuded from it. Now touch your

tongue to this dry substance, and you will find it sweet as sugar, and on the ash, hickory, poplar, pear and maple you will find it of a pleasant flavor, but on the oak it will not be so pleasant. At that time you will find no bees working on the leaves, but early the next morning return to your investigation and you will find those same trees alive with bees, provided there was a fall of dew the night before, as this substance must be dissolved before the bees can handle it.

In localities here, where no oak or black-gum timber grows, we get no better honey than is gathered from the so called honey-dew. The two kinds mentioned seem to make it very dark. D. M. R.

Lovett, Ind.

Convention Notice.

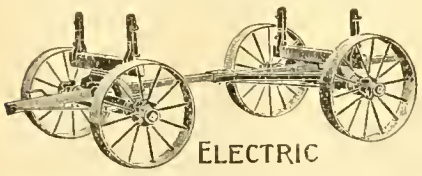
Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.

Hutto, Texas.

Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.



This wagon is composed of the best material throughout—white hickory axles, steel wheels, steel hounds, etc. Guaranteed to carry 4000 lbs.

These Electric Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low-down wagon at will. Write for Catalog of the full "Electric Line" to Electric Wheel Co., Box 16, Quincy, Ill.

Please mention Bee Journal when writing Advertisers.

Mr. Kipling Cured

By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT, Address, DR. PEIRO, Central Music Hall, Chicago.

Please mention Bee Journal when writing.

BEE-SUPPLIES.

Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor—in fact everything used by bee-keepers. Send for our Catalog.

C. H. W. WEBER,

2146 Central Ave., CINCINNATI, OHIO, Successor to CHAS. F. MUTH & SON and A. MUTH.

Honey and Beeswax Wanted.

15Atf Please mention the Bee Journal.

CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, May 8.—Not anything of consequence doing; a little honey is being sold at prices that have been prevailing for some time. White comb is scarce, but there is a surplus of dark. Extracted unchanged. Stocks light. Beeswax, 27c. R. A. BURNETT & CO.

NEW YORK, May 9.—Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 55@60c per gallon. Beeswax quiet at from 26@28 cents, according to quality.

Our market is in first-class condition, being bare of extracted honey, and demand good. New crop is beginning to arrive from the South. Comb honey is well cleaned up; some demand for white but demand for dark has ceast.

HILDRETH & SEGELKEN.

SAN FRANCISCO, May 24.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Prices for 1898 product remain nominally unchanged, with stocks light and in hands of jobbers. Values for this year's honey have not yet been establisht, but are almost certain to rule lower than the jobbing rates now current for old. This year's California crop is expected to aggregate 200 carloads, 75 percent of which will be from San Joaquin Valley and mainly alfalfa honey.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

KANSAS CITY, May 15.—No. 1 white comb, 15c; fancy amber, 14c; No. 1 amber, 13½c; fancy dark, 13c; No. 1 dark, 12c. White extracted, 6c; amber, 5½c; dark, 4@4½c. Beeswax, 25c.

C. C. CLEMONS & CO.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & CO.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it. PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.

M. H. HUNT.

WHEN YOU WANT ..QUEENS..

Send us your order. We will fill it by RETURN MAIL, with the best of Italians, large yellow Queens, healthy and prolific, workers gentle and the best of honey-gatherers. Tested Queens, $1.00 each; Untested, 75c; $8.00 per dozen. Send for our price-list, and see what others say.

J. W. K. SHAW & CO.,

LOREAUVILLE (Iberia Parish) LOUISIANA

22Atf Please mention the Bee Journal.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

Please mention Bee Journal when writing.

300 Cases of Second-Hand 60-pound Cans

We have found another lot of 300 cases (two cans in a case) of second-hand 60-pound Cans—practically as good as new. We offer them at 45 cents per case in lots of five, f.o.b. Chicago; or in lots of 10 cases or over, 40 cents per case. Address,

GEORGE W. YORK & CO.,

118 Michigan Street, CHICAGO, ILL.

Bee-Supplies.

Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

WALTER S. POUDER,

512 Mass. Ave., INDIANAPOLIS, INDIANA.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.
A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

Please mention Bee Journal when writing.

BEES **QUEENS**
Smokers, Sections, Comb Foundation And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill

Please mention Bee Journal when writing.

THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
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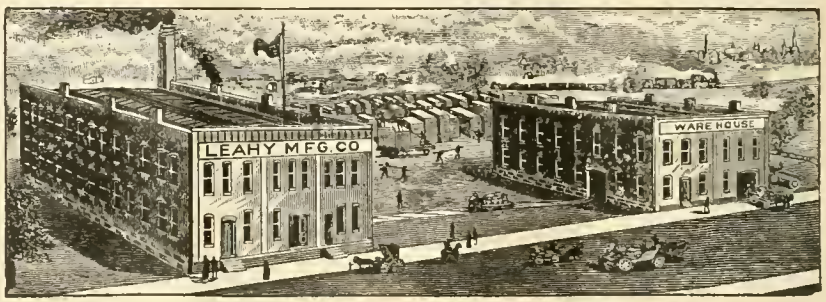

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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JUNE 15, 1899. No. 24.

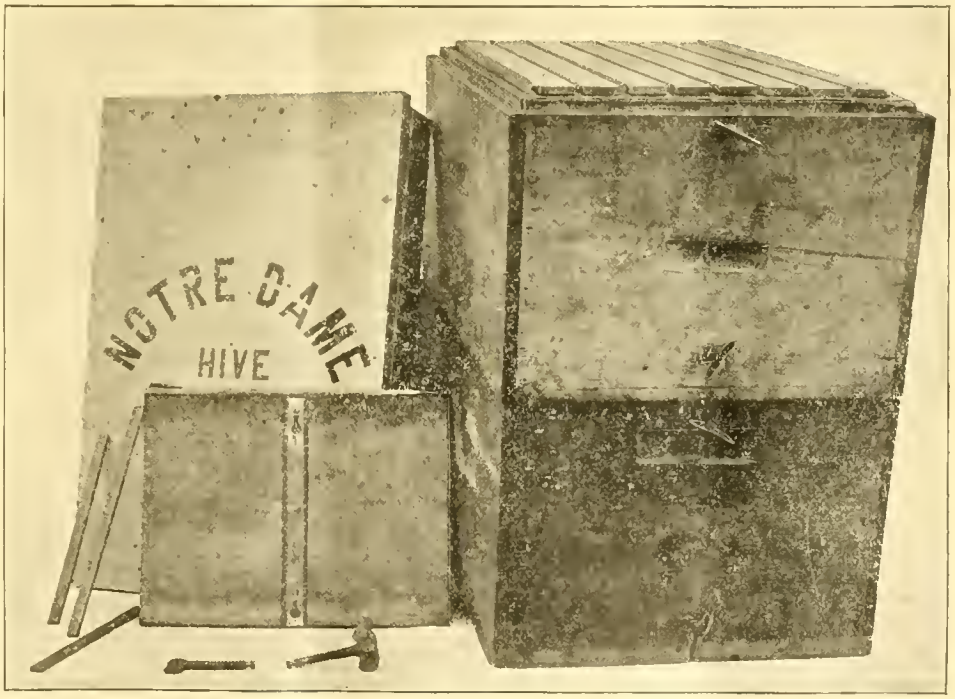
CONTRIBUTED ARTICLES

The Notre Dame Bee-Hive and Wintering Device.

BY B. J. CHRYSOSTOM.

ALMOST any box, or hive containing loose frames with space enough between the ends of the frames and hive to admit a board say ½ inch thick, can be converted into what in this locality is known as the "Notre Dame Hive," by means of a simple device consisting of the following pieces:

One strip of iron one inch wide, ⅛ inch thick, and the depth of the hive; two holes much like key-holes are puncht in it near each end. Four small screws to fasten this to the board, which is cut to fit in the end of the hive. Two or four ⅜x3 inch coach or wood screws, the points of which are cut off, and a groove cut near the end to fit in the slots in the strip of iron—a kind of little button which when in the slots will pull back as much as it will push forward. These screws, if only two, are put thru in the center of the end of the hive, and are so spaced that when the board is put on the slots in the iron strip will drop down in the grooves cut in the screws, and rest on the bottom of the hive. If four screws are used then two are put opposite the second frame from the outside. The heads of the screws are flattened for convenience. Three little strips of wood are nailed on the sides and bottom of the inside of the hive against which the board fits up tightly when screwed up against the frames. One little strip of oilcloth is tackt on the end of hive and board; this is to prevent the bees from getting behind the board. The edges should be turned in so that no threads are visible for the bees to pull and bite. The holes for the screens are bored with a bit smaller than the screws, and a screw of the same size with the point sharp is used to cut the thread in the wood, because the screw with the blunt point will not do the work.



The Notre Dame Bee-Hive and Wintering Device.

The above description was promist last fall, but had been delayed till spring for the purpose of further testing the superiority of the Notre Dame hive in wintering bees on stores very largely composed of honey-dew.

Some were of the opinion that if the bees could be kept warm and dry, and have several flights during winter and early spring, the bad effects of poor food would be, to a great extent, obviated. Such has been the case in this particular instance.

Our experimental work in this line was considerably aided by the issuing of three small swarms, about the first of September, from some nuclei which had been formed for the purpose of rearing late queens. The swarms were hived on drawn combs and fed honey-dew; two of the swarms were made queenless late in the fall, and put in full-depth supers and placed over the parent colony or nucleus, thus forming one colony on 16 frames.

The other swarm was hived on 10 frames, two of which contained hatching brood, and was fed about 20 pounds of honey-dew. To-day (April 20) this colony is working

nearly as large a force as many of the old ones, is in excellent condition, and bids fair to rival the best.

Our bees are wintered on the summer stands in houses, built without any pretentions to warmth, merely affording a shelter from storm and wet. About the middle of last October the bees were warmly packt in short straw and chaff, by placing a board wall about eight inches from the rear of the hives, and filling this space and that in front and between the hives with a mixture of short straw and and chaff. The space between the hives in some cases is two inches, and in others about five.

A strong cloth was put on the frames, and a full-depth super put on. Then one or two little woollen blankets, and then the super was almost filled with chaff over which a wirecloth was placed to keep the mice out; then more chaff, straw and forest leaves till all was entirely covered up. I believe that the bees never suffered the least from cold, because, so far as I know, the temperature of the packing never fell below 30 degrees. Measurements were taken from time to time with the following results:

Jan. 7—Thermometer outside 10 degrees above zero; in packing, 30 degrees above.

Jan. 19—Thermometer outside 12 degrees above zero; in packing, 42 degrees above.

Jan. 29—Thermometer outside 18 degrees below zero; in packing, 39 degrees above.

April 20—Thermometer outside 30 degrees above zero; in packing, 72 degrees above.

April 24—Thermometer outside 55 degrees above zero; in packing, 84 degrees above.

The uniformly high temperature in the packing is owing to the fact that there are no air-spaces around the ends of the frames, and the heat of the cluster radiates thru the walls of the hive and remains in the packing, thus protecting the bees and brood from the bad effects of sudden and severe changes in the weather. It is certainly a gratification to the bee-master, when he packs his bees snug and dry in the early fall, to know that they will not suffer from cold, and will need no further attention until the next May. It is also additional satisfaction, when wishing to look into a hive, to turn two thumb-screws and lift out the frames almost free of propolis.

I wish to state here that four screens to a hive would do the work better and more satisfactorily if two were placed opposite the second frames from the sides of the hive. Suppose we wish to expand the hive ⅛ of an inch, which I think is sufficient to let the frames lift out, then we have only to turn each of the four screws so much, and the space is equal on both sides.

If the bee-keepers in cold countries desire a hive that combines in itself the advantages of the box for safe wintering, and the loose frame hive with its facilities of frame manipulation made more easy and agreeable, a hive in which bees will winter better, packt in a shed secure from storm and wet, without the trouble, expense, care and anxiety attendant on cellar wintering, then they might do well to invest a few cents in the "Notre Dame Device," put it in one of their hives, and give it a trial.

With this hive bee-keepers will have no need of bee-cellars nor chaff hives. Cheaply built sheds would be better, and if properly built would save the trouble of moving hives, and the business would be made more easy and pleasant because much of the work could be done in the sheds or houses on rainy days, as I have been accustomed to do for several years.

I have learnt by experience that to avoid the loss of queens and other inconveniences to the bees, their houses ought to be built octagonal in form, so that three hives face to the northeast, three to the east, three to the southeast, three to the south, etc., with a board about 2½ feet wide and about 3 feet high extending out from each corner so as to make the division complete, and also to serve as a protection from winds. There ought to be a window to each three hives set in on pivots, so as to open and close easily. When looking thru a hive all windows should be closed, and opened when thru—the bees will then get out immediately. There is also room in this little house for surplus supplies, and a little corner to do the frame and section work. There are many advantages in this arrangement. It might be more profitable to keep 48 colonies in four such little houses in large hives (non-swarming) than to keep 100 small colonies in a yard in small hives. However, this is a question better discust by persons of long and successful experience—a subject on which I would like to read some thoughtful articles.

It is also important to have frames about five inches wide inserted in the wall against which the porticos of the hives fit tightly, and so placed in the wall as to give about two inches incline outward to the hives, so that the condenst moisture may run out readily.

Let every one who reads this article do his own thinking, and act on St. Paul's advice, "Prove everything, and hold fast to that which is good."

LATER.—Since writing the above report the following is added, which may be of interest in connection with the subject:

On April 22 it was observed that the bees were working very strong bringing in pollen and honey. It was evident if they continued they would fill their hives of 16 frames in three or four days. In order to prevent this it was thought best to put on supers. Some of the strongest colonies were that evening unpackt sufficiently to get supers on, containing 24 one-pound sections each. The supers were covered with a cloth, an empty super put on, and the winter packing returned.

To-day, April 28, the packing was removed for inspection, and the first hive showed the eight outside sections all filled ready for capping; the others had some honey stored in the supers. The fruit-trees will be in bloom the first week in May. If the weather continues favorable we may expect from 10 to 30 pounds of surplus honey per colony. To what cause shall we attribute the flourishing condition of our bees? To the long and severe winter and poor stores? Or to the superior excellence of the Notre Dame hive for comfortable wintering, and also to an early honey-flow from maples, poplars, and other early-blooming trees, and to the fact that there was a sufficiently large force of bees in each hive to bring it home?

May 6. The apple-trees were in full bloom on May 3, at which time we had rain and some cool weather, but the bees did fairly well. The packing has been removed, and some of the hives have been put on the scales, for the purpose of approximating the amount of honey stored from the middle of April till May 6.

The first colony weighed 146 pounds; this colony weighed 80 pounds when put into winter quarters. A considerable portion of this must have been consumed during the time elapst since last October, especially in rearing so much brood. This colony has 16 full-depth frames, and a super of 24 one-pound sections nicely capt. It is evident that this colony needs eight more full-depth frames so that the queen may have more brood-room, and the workers more space to store honey. It does seem early in the season to have colonies occupying 24 frames with 24 finisht sections, but such is the case.

The next colony weighed was one formed by uniting two nuclei last September. This colony tipt the scales at 104 pounds; weight of the same hive last fall being 76 pounds.

The next one was the little swarm that issued from a glass observation hive about the first of last September, which has been mentioned above. This colony weighed 72 pounds, and is in excellent condition.

The last one weighed 148 pounds, the weight of which was 76 pounds last fall; 76 pounds less 35 pounds (the weight of the hive) leaves the net weight of bees and stores. It is quite possible that the greater part of their stores had been consumed before April 15.

St. Joseph Co., Ind.

The Making of Nuclei—Questions Answered.

BY G. M. DOOLITTLE.

ON page 138, Dr. Miller is askt this question: "I intend to increase my number of colonies the coming season by dividing. My plan of doing it is this: I have 14 old colonies, and want to increase them to 28 in all. So I thought I would take 14 of my new hives in which I want to hive the new swarms, and make a nucleus in each by putting a frame of brood and eggs, and one of honey in each hive, and then contract the inside of the hive with a division-board so as to keep the bees which I intend to put into the hive confined to the side of the two frames. How many bees will I have to put into a hive? Will a pint do? And will these bees rear a queen from the eggs given them? Do you think a nucleus formed in this way will be all right? Would it be safe from robber bees?"

Now, as I intimated in a late article, I had expected to take the good Doctor to task for the way he answered that question, asking him a lot of questions regarding his answers to it, so as to draw him out further, but upon a later

reflection I have concluded to answer the same lot of questions myself, and then the readers of the American Bee Journal, as well as the Doctor, can see how we agree in the matter.

But before beginning at the general answering there is one item which I think should be noticed in the matter, which the Doctor never toucht upon at all. The questioner says: "I thought I would take 14 new hives in which I want to *hive* the new swarms" (italics mine), which would show that after his nuclei are formed later on he intends to place the swarms, which may issue, into these same hives having nuclei in them, for as soon as his 14 new hives are occupied with nuclei he will have 28 hives with bees in them, and that is the number he says he wants. Consequently, if he has any new swarms at all they must be hived in with those nuclei, or he must procure more hives, in which latter case he would have more than the desired 28 in the fall.

I know that he speaks of dividing, in his first sentence, but knowing the nature of bees I know that unless he takes more than the one frame of honey and brood from each colony, as he proposes, he *will* have swarms to hive, and as he speaks of wanting "to hive the new swarms," I take it for granted that he expects the new swarms, and is calculating to hive them in with the nuclei. But how he is to do this is something the Doctor failed to tell us, intentionally or otherwise. There is only one way which I know of without having many bees killed, and making a general "muss" of it all around; and that way is to have all the queens with clipt wings, those in the nuclei after they begin to lay, as well as those in the full colonies; then when a swarm issues allow the queen to run into a cage, stopping her in. Next, carry the parent colony to the stand of the nucleus you wish the swarm to go into, setting the nucleus off and the parent colony in the place of it, immediately letting the queen out of the cage and allowing her to run in her old home. Now set the nucleus on the stand previously occupied by the old colony, and, as expeditiously as possible, fill the hive with frames filled with comb foundation or empty comb.

By this time the swarm will have begun to return, and as quick as it does so, shake the bees and queen off their two combs down in front of the hive from a foot to 18 inches away from the entrance, when all will run in together without any quarreling, providing you smoked the nucleus on first removing it from its stand so its bees have filled themselves with honey. If you do not take these precautions the bees in the nucleus would kill the bees from the swarm as fast as they came back, in nine cases out of ten. The next day the nucleus and new swarm combined should be boxt, and the hive of the parent colony opened, and if the queen-cells are not already destroyed they should now be cut off, when, as a rule, swarming will be over with those two hives for the season, if plenty of section-room is provided for the colony having the old queen.

Now to answering the questions propounded: After telling us how he proposes to fix his hive with one frame of brood and one of honey he asks, "How many bees will I have to put into a hive? Will a pint do"? Well, that depends: If *four quarts* of bees are taken from any colony of the 14 our questioner says he has, and said 14 colonies are all in the same apiary where he is forming his nuclei, as it will be reasonable to infer, said four quarts will not be enough to make a decent nucleus of those two frames, providing *no precautions* are taken to make that four quarts of bees stay in that hive, for all but the very youngest fuzzy ones will go back home, and the fuzzy fellows run out in the grass and all about the outside of the hive where they will perish.

During my nearly 30 years of experience of forming nuclei with bees taken from a colony having a queen and putting them on a frame or two of brood and honey, it has been a great mystery to me how nearly every one will get back to the old hive, altho apparently half of those carried to the nucleus have never flown from the old hive before. But such is the fact, and it is useless to take bees from their mother and put them into a hive having combs of brood only expecting them to stay, unless they are fastened to the hive, or some precaution taken to make them stay "where put." But if you can go to your out-apiary, or to some neighboring bee-keeper, and get a *quart* of bees in a nucleus-box, such as I have described in previous issues of the American Bee Journal, and at the expiration of 24 hours put them on those two combs—one of brood and one of honey—you will have a good nucleus, and even if you so take bees from the same apiary in such a box, and keep them in the box 48 hours instead of the 24, feeding them so they will have all the food they need, they will stay when put in the hive nearly as well as those from the out-apiary, but not quite, unless you give them a queen of some kind, virgin or otherwise, after they have been in the box from 8 to 12 hours.

And now allow me to disagree with the Doctor a little. He takes special pains to tell the questioner that if the bees do rear a queen from the eggs given, she will be "a very poor affair." Well, as I said before, without any precaution toward making the bees stay on that frame of brood, they would all leave, and if so *no* queen would be reared at all—a *poor affair* or otherwise; but where bees are taken from an out-apiary and kept in a nucleus-box without any queen for 24 hours, at the expiration of which a *quart* of bees is turned loose on two frames fixt as the questioner proposes, they will rear *just as good* queens as by any of the plans used which deprive the colony of its *queen* while the cells are being built, as I have proven time and time again; for, while in the nucleus-box they do "so long" for a queen that nearly all of them will prepare royal jelly, and when they have access to brood they will just "flood" the young larva chosen for a queen with it nearly, if not quite, equal to those being reared in a colony preparing to cast a swarm. And a quart of bees on the two frames will keep up the necessary heat to fully perfect those queens, where treated as I have given, fully as good as will a strong colony whose queen has been taken from them that they may rear queens.

While I *do not* recommend this way of rearing queens, if the doubting ones will try it they will become convinced that a quart of bees so treated will rear queens as good as any known a score of years ago, outside of those reared by natural swarming. And if this be so, then the question, "Do you think a nucleus formed in this way will be all right"? would be answered in the affirmative, and the robbing part the same. Onondaga Co., N. Y.

The Use of Barrels as Honey-Packages.

BY C. P. DADANT.

IN a recent number of the American Bee Journal I see an editorial criticising the use of barrels as honey-packages.

I will readily agree that tin makes a much more convenient receptacle, yet barrels have served us so long, especially to keep honey for several years, that I cannot help saying a word in their favor. We have, many times in the past, kept honey as long as three and four years in barrels without any trouble.

The important thing is to have good, tight barrels, sound and well dried. The great mistake many bee-keepers make when putting their honey in barrels is to treat them as if intended for wine or vinegar, or other wood-soaking liquid. A barrel which needs to be soakt in order not to leak, is not safe for honey. Only the very best hardwood barrels should be used for honey, and among these, those that have been treated to a coat of glue, as for coal-oil or alcohol, are the safest. These are entirely impermeable, and unless they have been soakt and again dried they will not leak. If they have remained in a dry place when not in use, all that needs to be done is to tighten the hoops on them just before using them, and keep them as before—in a dry place. We have used some barrels over and over again for 10 or 15 years without any loss.

As to taking the barrel apart to take out the honey, it is an easy job, and does not injure the barrel in the least if properly done. When we speak of barrels, we mean iron-bound barrels, for wooden hoops are unsatisfactory, always. To open a barrel of granulated honey all you need is a strong gimlet, a hoop-chase and a hammer or mallet. The barrel is set on end, the head is thoroly cleansed, and the gimlet screwed into the center of it. Then a couple of marks are made on the edge of the head to correspond with similar marks on the chime, so the head may be replaced in the same position as first found, after the barrel has been emptied. The hoops are then chased off, the staves spread a little, and the head is lifted off by the help of the gimlet. The honey may then be scoopt out with a ladle, a scoop, a shovel, or even a spade, according to its density. After it has been entirely emptied, the head is replaced in exactly the position it occupied. A barrel treated in this way may be used over and over again without risk. This is not theory, but a practical fact, and the first thing I teach a new clerk who is expected to handle honey and put it up in different packages is how to remove a barrel head properly.

It is true that if we use the 60-pound cans we are saved

some trouble, but I do not believe I would trade good barrels for those 60-pound cans when harvesting honey which may have to be put into small receptacles, according to the customers' wishes. For instance, if we have a crop of 20,000 pounds of honey, and put it all in 60-pound cans, we may have orders for some 10-pound or 5-pound, or even smaller cans. You will ask, Why not put it up in different sizes? We have tried it, but this has to be done during the harvest, when we are busy, and then we do not know how much should be put up of each different size of packages. If it is all in 60-pound cans, when we take it out, to put, say 3,000 pounds in small sizes, we have 50 of those cans to empty. It is a great trouble to wash them, and it is not advisable to leave them sticky with honey for a season. If you wash them, they will not dry inside and will rust. If your honey is in large barrels the putting up of the 3,000 pounds will use up the honey of only about six barrels. These are easily emptied, easily cleansed, and ready for another crop without fear of rust or bad taste.

The demand for honey in 60-pound cans is on the increase, and I am glad of it. I should very much like to sell all the honey we produce in that shape, but we must cater to the trade, and I do not think that we will ever cease retailing out our goods in all sizes of packages, from 500 pounds to a single pound. We expect to use tin cans mainly, but we will always prefer barrels from which to put up different sizes according to orders.

One word of warning: It is unsafe to melt granulated honey and return it to the barrel while it is hot. Honey has such wonderful hygrometric properties that the hot honey will absorb any moisture that may exist in the wood and actually shrink it till it leaks. This does not happen with cold honey. We were caught at this twice before we understood what was the cause of the trouble. So if you have to melt honey do not put it back into the barrel before it is cold. It is always best to use a good, strong can—an extractor can is very good—as it may be used till the honey has all been drawn off. If large tin cans with open top were not so inconvenient, they would make excellent packages to keep honey till the apiarist is ready to put it up for retailing.

I spoke of barrels glued for coal-oil or alcohol; I meant barrels that have not been in use. A barrel that has contained alcohol is safe for honey, but a barrel that has contained coal-oil is fit for nothing but coal-oil afterwards.

"EXPERIENCED NOVICE" A MISTAKE.

I like Cogitator's friendly criticisms, which are always very much to the point, and pleasantly given, but I cannot pass his last mention of the new phrase coined by myself, as it would appear on page 164—"experienced novice." By referring to the quotation on the page mentioned, the reader will readily perceive that I meant "inexperienced novice;" the mistake was made either by my fault or by a typographical error. Altho I do not have the infallible correctness which belongs only to erudite writers like R. L. Taylor, I much prefer being guilty of the use of synonyms than contradictory expressions. Hancock Co., Ill.

A Chatty Letter on Various Topics.

BY W. A. PRYAL.

THE WEATHER AND QUEEN-REARING.—The weather has been so fine for the past few weeks, and the days seem so long, that I spend very little time within doors. I am glad that I am able to be in the open air so much, tho I like to spend several hours each day in reading or writing. Lately I have been giving what spare time I can command to my bees. I am in hopes that I will be able to attend to the 40 odd colonies I have in such a way that I will secure a good crop of honey. Then I want to rear a lot of queens. I have found queen-rearing a very fascinating occupation. I don't know anything I like better. I have been reading up all the literature bearing upon the subject I could get hold of. I have been very much taken up with "Thirty Years Among the Bees." I think it is about the most interestingly written book on bees publisht in this country. The title, tho, is badly chosen; it should be changed in future editions. Then it should be re-written and publisht in nice book form and bound in cloth. I believe that if a book is worth printing it should be worthy of a decent cover. Of course, cheap editions could be issued for those who may choose them in less pretentious bindings. My edition is in pamphlet form. It is too much of a bee-classic to send out that way. I have read "Scientific Queen-Rearing," but I do not like the plan in it nearly so well as I do those in the other book. Then, the latter gives the reader so many choices of ways that he can't go wrong, if he has had any previous knowledge of the business; and he is so honest in his expressions that it seems to me that one can't help but admire the man.

We have had no rain since the middle of April to speak of; there has been none this month, tho the weather has been threatening showers the past couple of days. Since I started this letter it has begun to rain some, and I should not wonder but we may get enough to lay the dust. While a good rain would be a benefit to the bee-pasturage, still, it would do great damage to the hay crop, much of which is now cut, and to the cherry crop, the earlier varieties of which are ripe. This fruit is much earlier than usual. Our black Tartarians are seldom ripe before the end of the first week in June. This year they are now ready to harvest. Cherries and most other fruit is not going to be a heavy crop in California this season, yet the fruit will be of large size and fine flavor. The trees are making a fine growth, which may indicate that there will be a heavy crop next year, provided there is not a dry season. The grain and hay crop in this portion of the State will be heavy; it will be above the average. In the lower part of the State I have been told by those who have been there recently, there will be no crops to speak of. Grass only five inches high is being cut for hay; here it is three and four feet high, and in some places more. I notice that Prof. Cook, in the last American Bee Journal, says that they have had but 7 inches of rain in his section; here we have had 23, I believe.

MR. PENDER AND THE UNIVERSITY.—When Mr. W. S. Pender was with me a week ago Sunday, I drove him thru the State University grounds, and showed him the several varieties of eucalypti we have introduced here. All the varieties grown in California are not to be seen in these grounds; neither was I able to show the gentleman all that are scattered over the place. I showed him some that are in other places hereabouts. I find that our names do not agree with many he calls by the same name. There is nothing like knowing the botanical name of a plant.

Mr. Pender was quite an observer of our styles of architecture; he said that we build very pretty residences. He wondered why the University did not have one or two large buildings rather than so many of various sizes. I told him that we were to have even more, and that some of the very fine and handsome buildings he saw were to be torn down along with all the smaller ones, and a grand system of building inaugurated, the plans of which are being prepared by the best architects in the world (there being an open competition and large premiums being held out for the best plans), and when everything is in readiness work will be begun. The plan is to make our State University the grandest in the world. The site is the finest possible, being about 200 feet above the bay, and opposite the Golden Gate. Our deaf, dumb and blind asylums, at Berkeley, have the name of being the finest of the kind anywhere, tho I hardly think the buildings are the best.

Quite a heavy shower fell while I was writing this page; it may rain all night. (LATER.—It did in showers, and neither did good nor harm—'twas too light.)

The indications are that honey is not going to be plentiful; the flowers do not yield much nectar. Perhaps later the flow may be better.

EXIT ADULTERATED HONEY.—To-day I called upon the grocer in Oakland where I deal, and where I sold some honey early this month, with the purpose of telling him that I was prepared to sell him some of this year's honey—extracted and comb—as I had commenced to harvest it. I was more than pleased to find out that my prospect of supplying the home market with extracted honey had increast very encouragingly recently. It came about in this way:

The city of Oakland has a health department that is up with the times; it has its health officer, sanitary inspector, food inspector, chemist, etc. It has a well equipt laboratory. Well, my grocer told me that the food inspector had called upon him a few days ago and askt to see what kinds of honey he was selling. He was shown some put up in glass jars or bottles—a piece of comb honey surrounded with what purported to be extracted honey. The markets here are flooded with honey put up in this shape, most of which bear the label of some one of the "syrup companies" of San Francisco. This particular sort that the grocer brought forth did not bear any label; it was a fair brand of the usual "honey" that has been so sold in the markets about the bay, and I suppose on the coast for many years.

But this sort of "honey" is getting its death blow. The inspector told the grocer *not to sell any more of the stuff as it is not fit for food.*

The grocer is an honorable young man, and will obey the arm of the law. I presume I can supply him with all the honey he may sell, and it seems that his store uses a good deal. I have been selling him some in bulk; he has some customers that like my honey better than the Southern California article, tho the former is usually darker than the latter. He says the folks at his home prefer my honey to anything they ever tasted in the honey line previously.

I believe the California pure food law is doing much good for the producers of wholesome foods. I notice that the labels of lots of things that I lookt upon as spurious articles of food now bear labels stating just what they are. It was a common thing here to see all kinds of oils intended for salad oil to bear the words "Pure Olive Oil." Now we see "Salad Oil," with the further information that it is obtained from cotton-seed. This is but a single instance of many others. Californians are very proud of their olive oil; like our honey, there is nothing else as good anywhere on the face of the globe (hic). Nuf said. Hurrah for *pure honey!* Alameda Co., Calif., May 23.

Summer Work in the Apiary—Seasonable Hints.

BY F. A. SNELL.

WITH the opening of the summer season and the opening of white clover bloom the most important season for the apiarist is at hand. It is a season full of interest and anticipations, and hopes usually run high. The main honey-producing season comes within the next few weeks, which time brings the bread and butter for family use for the year to a large extent with many, if a good crop of honey be secured. The results depend quite a good deal upon the skill and management of the bee-keeper. A good deal of work must be done if the best results are to be gained.

A good supply of hives in which to put new swarms should be all ready, and should be in a shady part of the bee-yard, so the hives may be reasonably cool when the swarms are put into them, for if the hives are hot, as will be the case when standing in the hot sun, the swarms are much more inclined to leave for parts unknown. The newly-hived swarms should be shaded for the same reason, and also better work will be done in the supers when they are put on if the extreme heat be avoided so far as may be.

The supers in full supply for a good season should now be ready. A foundation guide, or full sheets, should be in every brood-frame and honey-box. Any partially drawn combs should be used in the first frames or honey-boxes, as such are quite an inducement to the early entering of supers by the bees and work therein. These, when used, I prefer in the central part of the supers, and about three in each row of boxes when running for comb honey.

All hives and supers should be sweet and clean before using. Musty and filthy hives should not be used to put in new swarms, for such are often deserted, and I can see no economy in using such. Clean, new and good hives are cheap, and if kept well painted and properly cared for will last a lifetime. All utensils used in the apiary should be in order, and a place for each so that the apiarist may know just where to find them when needed, that no valuable time be lost in hunting them up.

The bee-yard, if in grass, should be kept mown down with a lawn-mower, and everything kept neatly, which is both pleasant and profitable, for more and better work can be done with such surroundings.

Supers should be placed on all colonies strong enough to begin the storing of surplus on time, so there will be no loss in the honey crop. Extra room should be given for surplus as needed. Experience will have to be the guide in this direction largely as to when this shall be done. The extent and length of the honey-flow must be considered in determining to how great an extent supers should be added.

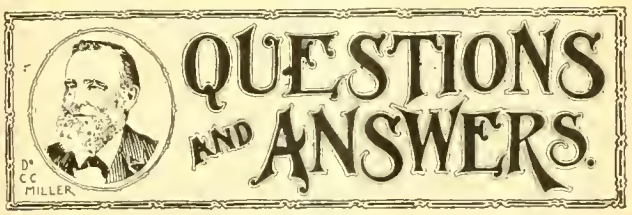
As the white honey harvest nears its close the surplus department should be diminisht in securing comb honey in order to get the greatest possible number of completed combs. At this time if too much room is allowed many boxes will be partially filled, and a less number completed. It is desirable to get the early honey as much by itself and as much of it as we can, and this can only be done by doing as above directed.

All newly-hived swarms strong in numbers should be given a super in about three days after being hived, and if surplus cases are at hand having a few drawn or partially-drawn combs these should be given them, for it is very important that an early start be secured in the boxes—first, to secure more honey, and, second, to avoid the crowding of the brood-chamber with honey, and the risk of the bees getting the swarming impulse and giving no surplus, which would be the case if swarming occurred. The giving of more surplus-room than one case to new colonies should be decided by the honey-flow as indicated heretofore.

At the close of the white honey harvest all honey-boxes should be taken off and stored in the honey-room, which should be bee-proof. During the honey-flow all boxes should be removed as soon as the outside combs in the surplus cases are capt over. During a scarcity of honey, such as we have after clover and basswood, bees are much inclined to rob, and in removing or handling honey it should be exposed to the least possible extent. We find at such a time bee-escapes are very useful, for with them a large amount of honey may be taken from the hives and stored in the honey-room without any excitement being caused among the bees, or inclination to rob, which is very gratifying.

The honey-room should be a warm one, and well ventilated, so the honey may improve in quality by becoming thicker, which heat alone can do, and then best with circulation.

Queenless colonies, if any exist, would better be united with nuclei or light swarms or colonies, and the honey stored so robbers cannot get to it, for bees are on the alert to find stores at all times and in all ways. During a light honey-flow, such as we sometimes have late in July or August, and not good enough for work in boxes, some honey will be stored by strong colonies in complete combs, such as we extract from, and all strong colonies should be given such if on hand, and some more honey will thus be secured, which is some help, and may add quite a considerable to one's income with a large apiary, and in the same proportion with fewer bees. Get ready for a fall honey-flow. Carroll Co., Ill., May 22.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Kingbirds and Bees.

What birds are bad on bees? I have but one colony of bees, and lots of kingbirds, catbirds, thrushes, etc., and do not want to kill any unless necessary. NEBRASKA.

ANSWER.—It isn't very likely that any birds do much damage to your bees unless it be the kingbirds. Sometimes they are troublesome, and sometimes not.

Caging the Queen.

I read very much about "caging the queen," which is a subject that I desire information upon. How is it done? I am in my second season of apiculture, and have never yet seen a queen, altho I have made diligent search and cut out queen-cells every eight days to prevent swarming. This last information I gained thru a friend who lives some distance away, thru correspondence. I have five colonies, and am greatly interested in bees and desire to enlarge, as I become conversant in apiculture, as I find it quite a woman's vocation. I am delightfully situated in the midst of 3,000 or 4,000 fruit-trees, desirable to bees. Is the enclosed cage what I need for caging queens? How is it used? OREG.

ANSWER.—The cage of which you send a picture is all right, and indeed any kind of a cage will do that allows the bees to communicate freely with the queen thru its walls. If the object is simply to keep a queen caged in a hive, the

simpler the cage the better. You can take a piece of wire-cloth about four inches square, wrap it around a stick one inch wide and ¾ thick, and four or five inches long. At one end tie some fine wire around to hold it together. Now slide the other end off the stick till about ¾ of an inch projects, and bend or fold down the wire-cloth upon the end of the stick. Your cage is now complete. When you desire to use it, draw out the stick, let the queen run in, and push the stick in perhaps an inch. You may take the queen in your fingers and put her in the cage, or, if you are somewhat patient you may set the cage over the queen and let her run in of her own accord.

Crimson Clover—Italian Bees.

1. Will crimson clover sown in the spring, bloom before or in the fall of the same year that it is sown?

2. How is it for feed for all kinds of stock?

3. Would it pay me to get pure Italians, with another bee-keeper within a little over half a mile away keeping black or mixt bees all the time? He won't get pure stock.

4. Of all the bees, which do you think are the best for Kansas? KANSAS.

ANSWERS.—1. I sowed some in the spring, and some of it bloomed that same year, but the larger part bloomed early the next summer. It may not act in all places alike

2. Fine.

3. You would stand no chance of keeping pure Italians with blacks only half a mile away, and yet it might pay you well to try to keep them. The hybrids would most likely be nearly as good workers as pure Italians, and occasionally introducing fresh Italian blood would keep up vigor.

4. Very likely nothing better than Italians.

Giving Swarms Combs or Foundation—Dividing to Prevent After-Swarms.

1. I have 16 colonies of bees in 8-frame Langstroth-Simplicity hives, running for comb honey. I have 16 more of the same kind of hives filled with good, straight worker-comb. Would you advise giving the new swarms full hives of comb? Or will the bees fill it with honey, leaving no place for the queen to lay? Which will be the better, the combs or foundation?

2. What is the best method for dividing, so as to prevent all after-swarms? WISCONSIN.

ANSWERS.—1. I should prefer the comb to foundation, but it may be well to give only half the combs at first, giving the rest 10 or 12 days later. For if all are given at first the bees would store in them rather than in sections.

2. One way is to take all but one or two frames of brood from a colony, leaving it all its bees, cutting out all queen-cells, and giving plenty of surplus room. Let the frame or two that you leave contain the youngest brood in the hive. The brood you take away may be put in another hive, brood from some other colony, if convenient, being added to fill out the hive, and this may be put on the stand of another colony which is removed to a new place. Care must be taken that all the cells are cut from these combs, and a laying queen from a nucleus is to be given and left caged for two days.

Blacks and Hybrids in Same Hive—Transferring.

1. Is the queen fertilized by more than one drone? If by only one, what is your reason for both black and hybrid Italian worker-bees in the same hive?

2. Is it a good plan to transfer bees from box-hives by this method? Place a hive containing either comb foundation or comb underneath the box that you wish to transfer the bees from, and drive the queen and some bees into the hive that is prepared, and then place a queen-excluder on top of the hive. Leave the box on top of the hive say 21 days, then remove it as the bees will be hatcht out in that time. ILLINOIS.

ANSWERS.—1. The belief is that in general a queen mates with only one drone. That part of the progeny take after one parent in color, part after the other, and part after both, is nothing unusual. In a family of 10 children with a black-headed father and a red-headed mother, you would not think it strange that some of them should have red hair, some black, and some a compromise.

2. The plan might do very well, only you would find it difficult to drive bees down-hill into an empty hive. You would find it easier to drive them up-hill. Turn the box-hive upside down, put the new hive over it and drive the bees up, or drive the bees up into some box convenient, then put the bees in the new hive. It will be well if you can put at least one frame of brood in the new hive before putting the excluder over, otherwise the queen may be slow about commencing to lay.

Hives and Honey-Extractors.

1. What kind of hive would you call mine, which has a gable cover, holds eight brood-frames, and has only place for one super of sections under its cover?

2. Taking all these points into consideration, would you call it a good hive for producing extracted honey? It has no movable bottom-board, which is one thing I do not like.

3. What hive having a movable bottom-board is also good for the production of extracted honey?

4. Which honey-extractor is the best for general use, in your consideration?

5. One of my neighbors has a honey-extractor for which he says that he paid $10 when new. It holds four frames of honey, and has a spout or faucet below for letting the honey out. What is its name? IOWA.

ANSWERS.—1. I don't know.

2. It may do very well, but one can judge very little from the description.

3. Any hive such as the 10-frame dovetailed, but remember that the best hive will accomplish little if badly managed, and with intelligent management almost any hive will do well. The man is more than the hive.

4. My knowledge of extractors from actual use is very limited, but I suppose almost any of the extractors now on the market are good, the Cowan, that you mention, among them.

5. I don't know. There may be more than one 4-frame extractor with a spout.

Starting in Bee-Keeping.

I now find that the closely confined office practice (doctor), and chemical work of a specialist, does not agree with my health. I am always well in the open air. So the question comes to me as it probably came to you (in a somewhat similar way) years ago, "Shall I keep on and die young, trying to lay up money here, or shall I be content with a living in close contact with nature, and live to a good old age?"

I have the best berry location—blueberries, blackberries and raspberries—in a radius of 15 miles; thousands of apple-trees, maples and small fruits; plenty of golden-rod and a moderate amount of other small honey-plants; little or no basswood, and acres of mountain laurel. Is it poisonous? Do the bees gather from it? An old farmer two miles off has 16 colonies that he manages on the old natural swarming plan, and lets the bees take care of themselves. He got 30 pounds of comb honey per colony last season, and said nothing about poisonous honey from laurel. If there was any doubt I would not risk it.

Do you think in the present condition of the honey business that I could make a living at it? How would you advise me to begin? Would you advise me to run for comb or extracted honey at first?

I had thought of starting 25 colonies in a correctly built house-apiary, and putting my increase out-doors and wintering them there.

I have sufficient capital to enable me to do what is necessary in order to start favorably. I have a brother in California and could start there if it seemed best. R. I.

ANSWERS.—Perhaps no other sort of questions makes me feel more keenly my incompetency to advise than yours. So many things must be taken into account, and with regard to a good many of them one can hardly have any positive knowledge. The best I can do is to reply somewhat generally. To one who desires to live to a good old age, keeping close company with nature, bee-keeping presents strong attraction. I should perhaps put it that I would rather die young after living a good many years than to die an old man after living but few years and laying up money that I could not enjoy. But the financial part cannot be entirely ignored, and that's where the pinch comes.

As to location, the probability is that you have a good one, but if you have told the *whole* truth about it your loca-

tion is poor. You have mentioned early honey-plants which are valuable to build up on, but which can hardly yield surplus, and late plants which will help fill up for winter, but say nothing of anything likely to give you a profitable crop, except to mention that basswood is scarce. Very likely, however, white clover is not lacking, and it is possible there are other good honey-plants that you have not mentioned. Please don't understand that those early honey-plants are unimportant. They are exceedingly important, because by their means your colonies can build up strong for the main harvest from clover, and possibly from other plants.

There is probably no foundation whatever for fear of honey from laurel. Many a feast of honey I've had in boyhood upon honey gathered where mountain laurel abounds.

To make a living from bee-keeping alone would be possible if you can live very economically, or if you could have a specially favorable location. In most locations there is a a possibility that the very first year might be one of entire failure, and in many places the failures occur two or more years in succession.

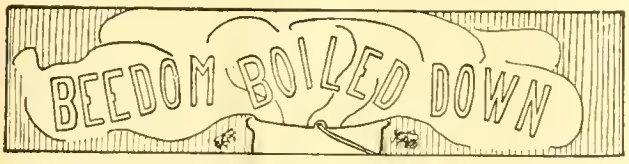
If it is a possible thing, it would be wise for you to begin right where you are on a small scale, still holding on to your present position, and after a year or so of experience with a small number of colonies (beginning with not more than 10) you would be much better able to decide whether it would be wise to adopt bee-keeping as a vocation. As an avocation for a professional man it is a delightful thing, and it is entirely in the range of possibilities that one may stand the strain of professional life with the burden of bee-keeping added better than without it.

Very likely your best plan would be to begin working for both comb and extracted honey; then you could drop one, or continue both.

Better let the house-apiary alone till you have had some experience.

Altho you might have a wider experience by working for a time in some other locality, the probability is that your better plan would be to work right where you expect to continue. Bee-keeping in one place may be quite different from that in some other place.

As a final word, I feel pretty safe in urging strongly that you do *not* make any very serious investment at first, and that you do not put yourself in position to depend entirely upon bee-keeping until you have felt your way carefully, so managing that at any time you can give up the bees without loss, until you have gained some knowledge that may guide you to a wise answer to your own question.



Light Wired-Foundation is announced as the latest new thing, in Gleanings in Bee-Culture. A step farther than was taken by Capt. Hetherington and the Van Deusens is to be taken, that is, a means of fastening the strands of wire to top and bottom-bar, or to the end-bars.

Diagnosing Foul Brood with a Microscope is considered by Prof. Cook impracticable for the average bee-keeper. He says in Gleanings in Bee-Culture:

"A good microscope could be had for from 20 to 30 dollars—one that would bring out these germs; but the skill and dexterity required in manipulation and determination would make it of little use to the average bee-keeper."

Renewing Queens at Two Years of Age is earnestly advised against by Herr Spuehler. In many cases a queen will do excellent work when she is three or more years old, and if she is doing good work when two years old the new queen that takes her place may not prove a gain. So long as a queen does good work, let her alone, leaving to the bees the task of removing her.—Deutsche Bienenzucht.

Narrow Sections.—Editor Hutchinson, of the Bee-Keepers' Review, mentions using sections 1½ inches wide, evidently not plain sections but with the usual inset, for he used them without separators, and after using some 5,000 of them he likes them. He thinks there may be some advantage in having the combs built 1½ inches from center to center, for that is about what the bees favor when left to their own sweet will; the thin combs are filled and sealed more quickly; the combs are built straight and uniform; the combs are usually well attacht to the wood and not rounded down and narrowed as in wider sections; the attachment to the wood being about the same as with wider sections, while the lesser weight makes less danger of breaking out; and, not least, he finds such sections very salable.

Does Foul Brood Wear Out?—Prof. Cook says in Gleanings in Bee-Culture:

"I do not think that foul brood is very apt to leave an apiary when once establisht. I have known several apiaries in California entirely ruined by it. I would not say, however, that bees might not recover from this trouble, tho I have always had my doubts. Some of the best bee-keepers in California have assured me that they have known it to be present, and afterward disappear."

Bees Changing Worker-Eggs to Drone-Eggs.—Editor Simmins says in Bee-Chat that he has frequently seen cases in which workers have changed worker-eggs so that they produced drones. But he has doubts as to the ability of workers to change drone-eggs so they will produce workers. But, Mr. Simmins, if finding drones in worker-cells is proof of the first change, is not finding workers in drone-cells (a thing which sometimes occurs) equally proof of the second change? But as yet we may be excused for being skeptical as to either change.

Introduction of Queens.—Here's the plan practiced by J. A. Holmberg, given in the Canadian Bee Journal:

"The old queen is caged and placed on the top of the frames for two or three hours. Then she is destroyed and the new queen is put in the same cage, which is placed in the same place over the frames. After an hour she is released, when she is accepted readily. The bees think she is their old queen, now having the odor of the old one gathered from the cage and her position over the bees. He says the plan is a good one in his practice."

Control of Queen-Fertilization is claimed to be secured by J. A. Holmberg, as reported in the Canadian Bee Journal:

"He practices Doolittle's plan in rearing queens. His nuclei are supported, not only with nursing-bees but with a good supply of drones. He removes the nucleus to his cellar where he leaves it well supplied with honey for about three days. He then, at 5:30 p.m., after all outside drones have returned to the hives, brings out his nucleus, when the virgin queen and drones will at once rush out for a flight after their long confinement. After their return the queen is examined and if she does not show evidence of having met the drone, the operation is repeated and she is given another chance at the same hour on the following day.

Getting Bees Started in Sections.—Editor Hutchinson says, in the Bee-Keepers' Review, that when the flow of honey starts suddenly with a rush there is no difficulty in getting bees to work in sections with no special inducement, but let the flow be light at first, gradually increasing, and the probability is that some colonies—many, if light Italians—will think of swarming rather than beginning work in sections. In such case, "nothing will so quickly and surely lure the bees into the sections as will nice empty combs." He says two or three sections containing drawn comb are enough to start the bees at work, but as he uses no separators, the bees make better work if the whole of the sections in the super contain combs. Some who use separators succeed nicely with a single bait comb.

Preventing After-Swarms.—G. M. Doolittle gives his two favorite methods in Gleanings. If the swarm is to be left on the old stand, it is hived on combs or on frames filled with foundation in the old hive, the brood-combs all being put in a new hive on a new stand, if necessary some of the bees being brusht off so that barely enough bees are left to take care of the brood, the weather being considered. Next morning one of these central combs is lifted out and a virgin queen allowed to run on it. The bees at once destroy all queen-cells. If the swarm is put on a new stand, he listens for piping the evening of the 8th day, and if none is heard he does not listen again till the evening of the 13th day. If no piping is heard by the evening of the 17th day, no swarm need be expected. Next morning after piping is heard, every queen-cell is cut off, the bees being shaken off each comb so that no cell may be mist.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

OLDEST BEE-PAPER IN AMERICA

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JUNE 15, 1899. NO. 24

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Growth of the New York Honey Market.—Formerly there was a demand during only part of the year, now it is continuous. There is a growing demand for extracted honey from druggists and confectioners, and for making honey-cakes, of which the Jews consume large quantities, and much extracted buckwheat is exported for making gingerbread. These items are given by J. E. Crane in Gleanings, and the editor adds that brewers now use glucose instead of honey, but bakers use large quantities of honey because it is the only sweetener that will allow the baked goods to remain moist without the expensive addition of glycerine.

Spreading Anti-Adulteration Information.—Mr. F. A. Snell, of Carroll Co., Ill., sends us the following which should commend itself to every one of our readers:

EDITOR YORK:—The investigation of foods adulterated, which was made in Chicago and reported on page 313, is an important one. I took that copy of the Bee Journal to the editor of our home paper, and called his attention to the article, and it was freely and gladly accepted and publisht in the June 1st issue, a copy of which I will send you. It is printed in full, and credit duly given.

Now I suggest that you call the attention of your readers to the importance of each one taking a copy of the "Old Reliable" to his editor and secure its insertion. This one thing, so easily done, will be the means of bringing this cursed adulteration business to the greater attention of the people. By each reader doing as suggested, it will be read, and food adulteration be denounced by tens of thousands of our people who from the very *horror* of the bad work, will press the importance of legislation, and stringent laws may be secured soon in favor of honest industries, and the punishment of the guilty rascals—the adulterators—who have done so much to undermine the health of our people, and rob the legitimate producer of pure food.

Let every bee-keeper now promptly do good missionary work along this line, and we may as a people reap the benefit in the near future. While conversing with others let us talk this matter up, and present it to our law-makers.

F. A. SNELL.

We think Mr. Snell has done well, not only in getting his home newspaper to reprint the article referred to, but also in making the suggestion that others "go and do likewise." What is needed is more agitation along the line indicated. Only those who are in sympathy with evil of any kind want to keep it husht up. Let the light be turned on until dark deeds and deeds that seek the darkness are shown up in all their wickedness.

Strong laws are needed against food adulteration of all kinds, and the way to get such laws is for those in favor of them to agitate the subject until victory is won. "Keeping everlastingly at it brings success" is a good maxim. Keeping everlastingly after wrong-doers is bound to lessen the wrong-doing after awhile.

Honey for Fine Cakes, Confectionery, Etc.—It seems that not only is the use of honey for such purposes on the increase, but the quality of the goods has been much improved within the past few years. Editor Root, of Gleanings in Bee-Culture, sent to one of the leading establishments of the National Biscuit Co., for samples of goods in which honey takes the place of sugar, and in reply received with the samples a note which said in part:

"We are sending you five varieties of cakes, in the formula for which honey is the principal factor; besides, it gives variety in flavor different from any other sweetenings, and it makes goods much lighter and finer in appearance. The names of the goods are as follows: Honey-jumbles, iced honey-cakes, frosted creams, honey-bars, and honey-cakes plain. We are on the increase every year in the use of honey in the manufacture of cakes."

Perhaps the most valuable feature of cakes made with honey is their keeping quality. As a test, A. I. Root kept some honey-cakes two years, when they were found to be just as good as new. And we had some in our office for two or three years after the World's Fair, in 1893, that had been made several years before that great show, and they were just as good as ever. Age seemed to have no effect on them whatever, unless it was to improve them. Many baking concerns in this country use extracted honey by the carload; and some of them seem to prefer the darker grades of honey, on account of their generally stronger flavor.

Suggestions for the National Association.—So long as advice costs nothing perhaps it will not be objected to. In the following we think Mr. Moore has given some good suggestions or advice, which we would like to see acted upon by the officers of the United States Bee-Keepers' Association:

The United States Bee-Keepers' Association has been doing much good in the past, and will no doubt do much in the future to benefit bee-keepers. But there is one thing that might be changed to the end that the Association shall be better advertised than it has been in the past. Let us have a short report, or article, every month from the general manager or secretary, or both, on the work the Association has done for the preceding month, and the new plans that are being made for future work.

A yearly report may be all right for old members, and those who have put on the harness; but how about the other 300,000 bee-keepers that we are anxious to get into the fold?

The greatest business enterprises have been built up on broadcast advertising, and this is necessary for every business, both small and great.

I take it that all the bee-papers would publish free any remarks Mr. Secor and Dr. Mason chose to make on the progress and aims of the Association. Articles could be sent to one bee-periodical with the request that all the others copy.

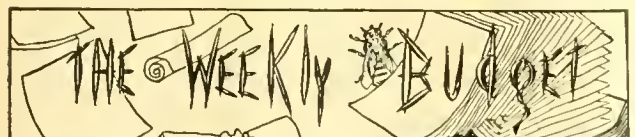
If the officers of the Association did not wish to make all the contributions themselves, they could request some bee-keeper to write a paper for publication on some phase of the Association's work. Suppose prominent apiarists look up the number and form of mixtures and adulterations of honey in Indianapolis, New Orleans, San Francisco, New York, Cleveland, and other large cities, and report the same thru the papers for our information and instruction.

The first step toward curing any disorder is a perfect knowledge of the symptoms. This matter of adulteration and prevention of the same is being agitated by the people more than ever before; and we must dig up new ideas and new methods of work, or have the procession pass us.

HERMAN F. MOORE.

We hope that Messrs. Secor and Mason will consider the foregoing suggestions in the same friendly spirit in which we know they are given. People are not tumbling over each other these days to get into an organization that they know but little about. Inform them, and they will be ready to join, provided the information shows it to be worthy of their support. Let us keep the excellent objects and work of the United States Bee-Keepers' Association ever and always before the bee-keeping public.

Apis Dorsata Caught at Last.—Gleanings in Bee-Culture for June 1 contains a letter from Rev. W. E. Rambo, a missionary in India, who has found a colony of Apis dorsata. It was on a limb of a tree about 60 feet from the ground, and very difficult of approach. Seen thru a field-glass, Mr. Rambo reports the bees as very beautiful. He spent from 9:30 p.m. till 4:30 a.m. in the tree; smoked the bees, and secured half of them, but does not know whether he got the queen or not. The single comb was 30 inches by about 15 deep. The greater part of the comb dropt to the ground, and was made into jam, but enough was secured to fill nearly three Langstroth frames. Those who are anxious to secure Apis dorsata will watch with much interest to see what success Mr. Rambo may have in taming the big bee.



MR. O. O. POPPLETON, of Florida, we understand, expects to be at the Philadelphia convention. He's a man worth seeing. There are many others like him in beedom. And some of them also will be in Philadelphia when the bee-keepers "swarm" there in September. Better get ready to go. The convention begins Tuesday evening, Sept. 5.

* * * * *

PROF. E. A. GASTMAN, of Decatur, Ill., is, I think, the nestor of superintendents of city schools in this country. For 38 consecutive years he has been in the public schools of that city, and its superintendent ever since it had a superintendent. On a delightful visit at his home he told me he had never made much money out of bee-keeping (I think he never reacht 100 colonies, and his location is poor), but the delightful out-door work had kept him in condition for going on with his work when others were worn out. I think he's about 65 years young. [The Doctor might have said that, had it not been for the bees, *he* probably would not have been among us now. Years ago, if I make no mistake, he gave up a lucrative position, having a fat salary attacht to it, on account of his health. He preferred a smaller salary, God's pure air, and a longer lease of life. And he got them. The bee-keeping fraternity can rejoice that we have so many professional men in our ranks. We have our lawyers, doctors, members of Congress, and our senators, school-teachers, professors in colleges, many of whom have been driven to bee-keeping as a pleasant and profitable pastime. Such men in our ranks have done much to enrich our literature and exalt our calling. Is there any other rural pursuit that can show such an array of talent? —EDITOR.] From Dr. Miller's "Stray Straws" in Gleanings in Bee-Culture.

* * * * *

HON. J. M. HAMBAUGH, the inspector of apiaries for San Diego Co., Calif., writing us June 1, reported as follows:

"FRIEND YORK:—It has been so miserably cold and disagreeable on the coast that I have not been able to get out inspecting, but am awaiting suitable weather. This I know sounds strange to come from this land of sunshine. Yes, and to cap the climax, last night and to-day we have had in the region of ½ inch of rainfall, which, in consideration of the hay and grain crop being nearly all cut and lying loose upon the ground, is more of a calamity than a benefit. Of course it will help out the bees, and the fruits will be benefited, but it is one of California's 'little jokers.'"

* * * * *

DR. MILLER has told on himself again (and this time also gets somebody else's "fingers in the pi"). Here's one of his "Stray Straws" in June 1st Gleanings in Bee-Culture:

"On my return from Illinois Sunday-school convention I sat with Editor York and his efficient helpers around his festive board, or, rather at one side of the board, for the board was up against the wall in the printing-office, and the noon-day lunch tasted all the better because the fair hands that prepared it had been setting type just before."

It's a wonder the Doctor didn't tell what he had for dinner that day. But it likely was so little that it failed to fill up any, and thus was not noticeable. If those "fair hands" ever get hold of the Doctor again, they'll make a good case of printer's pi out of him. He won't be so "festive" after that.

* * * * *

MR. HERMAN F. MOORE, secretary of the Chicago Bee-Keepers' Association, is rapidly becoming one of the greatest bee-cranks in this part of the country. He talks bees most of the time when awake, and we doubt not his wife could testify to his keeping up an almost constant buzz in his sleep. Mr. Moore was invited to address the students of the academy of Northwestern University, at Evanston, Ill., on the subject of "Bees and Flowers," Friday, May 19. Prof. H. F. Fisk, principal of the academy, in a letter sent to Mr. Moore afterward, had this to say in reference to the apiarian address:

"MY DEAR MR. MOORE:—I desire to express my hearty appreciation of your interesting address to the school on last Friday.....I wish I could give you an honorarium that would suitably recognize the real value of the service rendered to our young people.

"Yours very truly, H. F. FISK."

Then the Evanston Index for May 20 contained the following notice of Mr. Moore's talk:

"An address on 'Bees and Flowers' was given by Herman F. Moore, secretary of the Chicago Bee-Keepers' Association, at the academy chapel exercises yesterday afternoon.

"For an hour Mr. Moore kept the 'preps' interested by the number of unsuspected phases of apiarian lore he presented. Queen-bees and their royal vagaries, the best methods of hiving swarms, the races of bees, the hexagonal forms of cells, the differences in flavor produced in honey from different flowers, poisonous honey, wild honey, were all successfully treated. From these subjects the lecturer past to the great establishments owned by some American bee-keepers, and phenomenal yields of honey.

"The address was ingenious, and showed special research."

Mr. Moore is an interesting speaker, and fully informed on his subject. He is a hard worker, and unless we miss our guess he will be heard from in a very effective manner very soon. Keep your ear close to the ground for awhile.

Hildreth & Segelken, JOBBERS AND COMMISSION MERCHANTS.....

120-122 W. Broadway, NEW YORK. **HONEY,** Beeswax, Maple Sugar and Syrup.

We desire to inform our friends and patrons that our firm has been re-organized and additional capital added. The business will be conducted under the firm name and style of

HILDRETH & SEGELKEN,

at the old stand, where we have had the pleasure of serving our friends for the past 11 years. Management and supervision will be the same and our business methods—those of square and honest dealings—will be practiced as heretofore.

We believe we have won the esteem and confidence of our shippers thruout the country, and that our dealings, as a rule, have been of the most pleasant nature.

Our additional capital will put us in position to increase our already large business still farther, if possible, and at the same time enable us to treat our shippers even more liberally than heretofore, in making advances, etc.

Records will show that we handle by far the bulk of all the honey sent to our market. We make honey the principal part of our business, are personally acquainted and have trade connections all over the country, which enable us to handle any amount of honey to better advantage than any other house.

Old shippers know us and will bear us out in what we have said. Those bee-keepers who do not know us and have had no dealings with us, we would cordially invite to correspond with us and make our acquaintance. We not only handle on commission but buy largely as well, from small lots to carloads, for spot cash.

We wish to call the attention of the Southern bee-keepers to the fact, that our market never was in better condition than this season. Old stock is disposed of and the market is bare, with a good demand. New crop will find ready sale and at higher prices than have ruled for years past. We would advise them to send their honey, while there is a good demand at good prices, as later on conditions of the market may change.

We also handle **MAPLE SUGAR AND SYRUP** very extensively, and would be pleased to hear from those having any of these goods to offer.

In conclusion, we wish to extend our thanks to all of our shippers for their past favors, and trust to receive their kind consideration in the future.

21A4t Please mention the American Bee Journal.

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

Italian Queens

Reared by the Doolittle method from the BEST HONEY-GATHERERS.
Untested, 50 cents each; $6.00 per dozen. Safe arrival and reasonable satisfaction.

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24E8t FORT DEPOSIT, ALA.

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AGRICULTURAL EPITOMIST.

Sample copy **Free to any address** upon receipt of name and address plainly written on postal card naming paper in which you saw this ad.

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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.
Please mention Bee Journal when writing.

In the multitude of counsellors there is safety.—Prov. 11-14.

Italians, Blacks, and Black-Italians Swarming Without Capt Queen-Cells.

Query 92.—It is generally admitted, I believe, that Italian bees will sometimes swarm without having capt queen-cells in the hive, and sometimes even without having queen-cells started.

1. In the light of your experience, are you prepared to affirm that black bees can be depended upon not to swarm without capt queen-cells?

2. Same question applied to black-Italian hybrids.—MINNESOTA.

A. F. Brown—1 and 2. No.

Eugene Secor—1 and 2. No.

C. Davenport—1 and 2. No.

Chas. Dadant & Son—1 and 2. No.

J. A. Stone—1 and 2. I am not prepared to say.

Mrs. L. Harrison—1. Yes. 2. I think not.

Dr. J. P. H. Brown—1 and 2. I cannot "affirm."

W. G. Larrabee—1 and 2. I do not think they can.

J. M. Hambaugh—1 and 2. I am not authority on this subject.

E. Whitcomb—1 and 2. I don't know; have had no experience.

E. S. Lovesy—1 and 2. I have had no experience to speak of with any kind of black bees; my bees are mostly the leather-colored hybrids from ⅛ to ¾ Italian, and the

Extracted Honey Wanted

As soon as you have any good, well-ripened Extracted Honey for sale, send us a small sample, stating quantity, price expected delivered in Chicago, and how put up. Prefer it in 60-pound tin cans. Expect to be able to place carload lots as well as smaller shipments of Extracted Honey. But don't ship us any until we order. Address,

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with our new patent
Kerosene Sprayers
is simple indeed. Kerosene emulsion made while pumping. 12 varieties sprayers, Bordeaux and Vermorel Nozzles, the "World's Best."
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Golden Italian Queens Warranted purely mated; all Queens by return mail; will run 1,200 nuclei; Queens reared by Doolittle's method; safe delivery and satisfaction guaranteed; have 11 years' experience and know what good Queens are.

Prices 75c each; 6 for $4. Selected, $1; 6 for $5. After July 1, 50c each; 6 for $2.75. Selected, 75c; 6 for $4.

My Queens are prolific and workers, industrious as well as beautiful to look at; hundreds of testimonials prove this. I just now have a nice lot of Queens which have just started to lay. Order at once and I will send you something fine.

SPECIAL LOW PRICE on Queens in quantities. Address,

H. G. QUIRIN, Parkertown, Erie Co. Ohio.
Money Order Office, BELLEVUE.

22A21t Please mention the Bee Journal.

Root's Column

WE WANT every reader of this paper to send at once for a sample copy of GLEANINGS IN BEE-CULTURE. See some of our offers below.

Please mention this column when writing.

Gleanings in Bee-Culture

Clubbing Rates...

For One Dollar—GLEANINGS and your choice of the following papers one year:

AMERICAN AGRICULTURIST with Farmer's Almanac.
ORANGE JUDD FARMER with Farmer's Almanac.
N. E. HOMESTEAD with Farmer's Almanac.
FARM JOURNAL.
POULTRY-KEEPER.

For One Dollar and Ten Cents—GLEANINGS and your choice of the following papers one year:

PRACTICAL FARMER, PRAIRIE FARMER,
MICHIGAN FARMER, OHIO FARMER.

For One Dollar and Twenty-Five Cts.—GLEANINGS and RURAL NEW-YORKER one year.

For One Dollar and Thirty Cents—GLEANINGS and NATIONAL STOCKMAN AND FARMER one year.

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GLEANINGS ONE YEAR, and one untested Italian Queen, for $1.00 only. We begin mailing these Queens in June, and orders are filled in rotation, so the sooner your order comes, the earlier you will get the Queen.

GLEANINGS ONE YEAR, and No. 1 Repairing Outfit. Price of this combination only $1.75. We can ship these outfits from Syracuse, N. Y., Mechanic Falls, Maine, Medina, O., or Des Moines, Iowa, so the freight will be low.

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The A. I. Root Company

MEDINA, OHIO.

main incentive to the swarming habit is heat and overcrowding. I remove the cause, and have no trouble in the matter.

E. France—1. No. 2. No; altho all bees will usually have capt queen-cells when they swarm.

O. O. Poppleton—1 and 2. No. to both questions; but I have never known an instance of either doing so.

R. L. Taylor—1. No, but I never knew them to do it. 2. I have had hybrids swarm without capt queen-cells.

R. C. Aikin—1 and 2. I have not had blacks for 20 years or more, and we did not think of that point before that.

Prof. A. J. Cook—1. No. there will be cases. 2. The same as No. 1. All bees may behave so. It is exceptional even with Italians.

Dr. C. C. Miller—1 and 2. I wouldn't like to say so under oath. I think Italians seldom swarm without capt cells *when left to themselves.*

Mrs. J. M. Null—1. Yes. 2. Yes. But the abnormal swarming with Italians is very rare, and then is often superinduced by lack of ventilation.

G. M. Doolittle—1 and 2. I see little difference in bees regarding the matter. In times of excessive swarming, all varieties of bees fail to observe general rules.

D. W. Heise—1 and 2. I have never known black or black-Italian hybrid colonies in normal condition to do so. I would not affirm, however, that they could be depended upon not to do so.

Mrs. A. J. Barber—1 and 2. I have had but little experience with black bees, so I cannot say. The few I had were so unsatisfactory generally that I destroyed the queens and Italianized them.

J. E. Pond—1 and 2. I am prepared to affirm that both black and "black-Italian hybrids" have swarmed in my apiary, not only without "capt queen-cells," but without a rudiment of a queen-cell at all.

C. H. Dibbern—I have never known Italians or any other bees to swarm without having queen-cells, either capt or uncapt. I am not prepared to say, however, that they will not sometimes do so, but I think rarely.

P. H. Elwood—When any variety of bees swarm without capt cells it is usually because the heat has driven them out. When queen-cells have been broken out of a swarm the bees are liable to swarm without capt cells.

Dr. A. B. Mason—1. No, I never kept black bees. 2. They cannot be depended upon not to swarm without capt queen-cells. They will sometimes swarm without making *any* preparation in the way of starting queen-cells.

Emerson T. Abbott—1 and 2. I have never known a swarm under normal conditions without queen-cells being started. In the light of my experience there are very few things you can depend upon any kind of bees doing every time.

Adrian Getaz—1 and 2. I find but little difference between the different breeds. Such swarming generally occurs when the colonies are much overcrowded, or lack sufficient ventilation, and are often absconding cases, rather than normal swarming.

S. T. Pettit—1. I have never known any bees to swarm without first preparing queen-cells or cups with the necessary egg in each. I have never known pure black bees to swarm without leaving capt queen-cells. 2. I cannot tell what hybrids may do under severe treatment.

Rev. M. Mahin—1. I have known Italian bees to swarm without having queen-cells even started. I have not had any experience to speak of with black bees. 2. I think that crosses between the Italians and blacks will sometimes swarm without queen-cells. There are no *hybrid* bees.

G. W. Demaree—From long and careful observation along this line of swarming, I am led to the conclusion that all the varieties of bees with which I have had experi-

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
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Add 25 cents to your order, for cartage, if wanted by freight.

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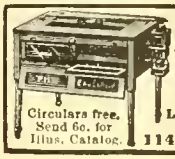

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Thousands in successful operation. Lowest priced 1st-class hatcher made. Circulars free. Send 6c. for Illus. Catalog.

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ADEL BEES Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

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We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

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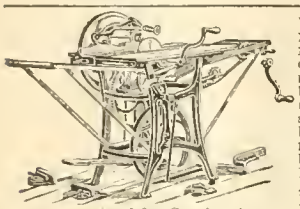

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PATENT WIRED COMB FOUNDATION
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Thin Flat-Bottom Foundation
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Being the cleanest is usually workt the quickest of any foundation made.

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Queens Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address
Theodore Bender, Canton, Ohio.
8Atf Please mention the Bee Journal.

ence are likely to lose their heads under the influence of sudden prosperity, and do eccentric things; among which may be swarming before queen-cells are even started.

GENERAL ITEMS

Good Honey-Year Expected.

I began the spring of 1898 with 85 colonies in two apiaries, and took off 4,400 pounds of surplus, about ¾ being extracted. I packt 100 colonies for winter and lost 20; about half of them became queenless, which I united with others. Some of those I have left are weak, but are now doing well. I had two swarms yesterday. There was considerable loss in this vicinity the past winter and spring. The prospects are good for a honey-year. B. W. PECK.
Ashtabula Co., Ohio, May 27.

Small Loss in Wintering.

I wintered my bees outside, and lost three colonies; the others are doing very well; especially the colony of Italians in an observatory hive is doing exceedingly well. I expect a fine swarm from them soon. I have now 30 colonies EDW. ROWLAND.
Hudson Co., N. J., May 23.

Half a Crop Expected.

My 72 colonies of bees came thru the winter with a loss of one. I extracted 224 gallons of honey last week. I don't expect more than half a crop this year. Two-thirds of the bees in this county are dead; cause, starvation. Our people keep their bees mostly in soap boxes and hollow-logs, and

Mr. Kipling Cured
By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT, Address, DR. PEIRO,
Central Music Hall, Chicago.

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THE FASTEST "HOSS"
on the track may not be the "proudest looker." Don't bet until you know the pedigree and record. **Page Fence** has both.
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Liberal Discounts to the Trade.

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BEE-HIVES AND SECTIONS

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This is the Verdict of Thousands of Customers and the Acknowledgment of Competitors.

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rob from the top. This time their knives were too long. One man lost 110 colonies out of 125; another, 45 out of 65; still another, 20 out of 21; another, 50 from 90. Some lost all. My son lost 3 out of 50. My daughter lost 4 out of 45. Everything is dried up for want of rain. H. F. BAKER.

Liberty Co., Fla., May 22.

Bees in Good Condition.

Bees are in good condition, and conditions are favorable for a good season. There was considerable loss among old-style bee-keepers here the past winter.

S. W. SMILEY.

Lincoln Co., Mo., May 15.

Colonies Built Up Fast.

I lost two colonies out of 18 in winter, and three were queenless. One of the colonies was strong with bees, but was queenless.

Our white clover is nearly all winter-killed. The spring has been so wet and cold that the bees have not been able to do very much on fruit-bloom, but they seem to be building up pretty fast. I see there are some drones flying already. We like the American Bee Journal, and hope that all its readers will be like us—pay two years in advance. R. CHINN.

Dixon Co., Neb., May 24.

Wintering Bees on Honey-Dew.

Bees in this section of West Virginia wintered only moderately well, and I have come to the conclusion that honey-dew was the cause, for the colonies nearly dwindled down to only a few bees thru the winter, but only three died out of 51, which I consider a light loss for wintering on the summer stands. One of them had 25 pounds of honey in easy reach. Nevertheless, as soon as the warm weather set in they reared brood as fast and lookt as healthy as in any other season. I feed sugar in the spring for a stimulant, and especially watch carefully for intervals when they get no honey, so as to keep brood-rearing going on. I also practice spreading brood, which I now am very successful with, while before, being inexperienced along that line, I lost several colonies for meddling with them.

I think it is a great help to put the colony in condition for honey gathering as early as possible, especially when the queens are not of the very best quality, which need pushing to do their demanded duty.

My bees are in fair condition now, as out of 10 colonies thru which I lookt to-day, 8 had partially completed queen-cells, which means swarms in the first week of June.

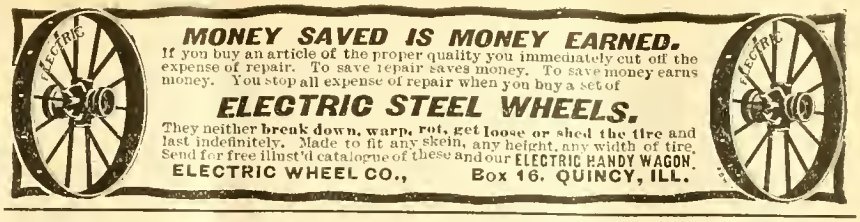
Success to the American Bee Journal.

W. C. KAUTZ.

Webster Co., W. Va., May 26.

Beginner's Experience—Coal Smoke

I purchast 4 good, strong colonies of bees from a neighbor bee-keeper last spring, and as I was inexperienced, the man I bought the bees of imparted his bee-knowlege very freely, which favor I certainly appreciated. Before I was thru caring for his bees (for he went away to Kansas, leaving his bees in my care), I had gained considerable knowledge about them. From my 4 colonies one swarm issued about the first of May, unexpectedly to me, which I lost, as they came out while I was away from home. After this I had no more swarms, for I watcht them very closely, and when they showed signs of swarming I would divide them by taking, say two frames of brood with all adhering bees from one hive, say No. 1, and placing in a new colony I aimed to form, then removing No. 1 to a new stand, and putting my new one on No. 1's old stand, to catch the field-bees from No. 1. Then to weaken other strong colonies, and give Mrs. Queen more room to deposit her many eggs, I removed from each strong colony from one to two frames well filled with brood, shaking off all bees, and also placing them in the new colony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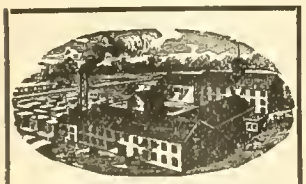

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We have found another lot of 300 cases (two cans in a case) of second-hand 60-pound Cans- practically as good as new. We offer them at 45 cents per case in lots of five, f.o.b. Chicago; or in lots of 10 cases or over, 40 cents per case. Address,

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just formed from No. 1, sometimes making my new colony almost as strong as any of the others, thereby discouraging swarming in many other colonies. I put in empty frames where I take out frames of brood in all the hives.

I increast to 8 last season, and got more honey than I expected, considering the dry weather.

My bees came thru the severe cold last winter better than I expected they would. I did not lose any wintered on the summer stands.

I have increast from 8 to 11 this spring, and have had no swarms so far. Bees are doing fairly well, yes, extra well, considering what they have gone thru in the past 6 or 8 months.

I was manipulating a very strong colony of bees in the bee-yard a few weeks since, and they got pretty badly workt up, so much so that they told me (by their actions) to "git," which I did, for my smoker had failed to smoke when I needed it. So on my way to the "chip-pile" (to recruit my smoke) I past the coal-house, and thought I, "I wonder if coal-smoke would not quiet them?" So I dumpt in a single handful of small lumps, and again made a charge upon them. But, alas! when I marcht forward with a cloud of black smoke rising, they ran like cowards. Is coal smoke injurious to any part of the colony—I mean to the queen, bees, brood or honey? If not, try it once and see the result. WM. HITCHCOCK.

Lonoke Co., Ark., May 20.

Good Honey from Alabama.

I send a sample of extracted honey, taken May 22 from frames ⅔ capt. I want to know thru the American Bee Journal how it compares with your best grades in body and color. One of our best honey-plants (ti-ti) failed on account of the freeze in February. L. W. MCRAE.

Washington Co., Ala., May 23.

[The generous sample of honey came all right, and we find it quite equal in body to the best honey we are acquainted with, but think in color it is a shade darker. But it certainly is fine honey, and should suit any body who cares at all for "the real thing." EDITOR.]

Bees in Fine Condition.

I did not lose a single colony the past winter, on the summer stands. I use the Hill's device on top of the frames, and the super is filled with leaves; then I turn a bottomless box over the whole thing, with bee-space in front. I keep the snow from the entrance, and when there comes a warm day after a long cold spell, when some of the bees are flying, I give the hives of those that are not out a few good kicks which makes them all have a good flight; then they are in good condition for another cold spell. If the bees are sick from black honey, I turn the hive down to the sun, take the bottom-board off, and let the sun shine in the hive. This will make them all have a flight. Before night fix them all back in good shape. Several of my neighbors lost half of their bees. Black honey was the trouble. The prospect is fine for a crop of honey. The white clover is looking well, but we are having too much rain.

Sangamon Co., Ill., May 31. C. V. MANN.

P. S.—Hold on a minute. Bees are swarming. I have them in their new house. It was a fine, large swarm. This is my first swarm for the season of 1899. C. V. M.

The Yellow Sweet Clover.

I do not think that the value of yellow sweet clover — Mellilotus officinalis— is known or appreciated as it should be. There is very little white clover to be seen in this locality, as it was destroyed by the severe freezing last winter, in the absence of snow, but the yellow sweet clover is in full bloom like a bank of gold.

It blooms fully a month before its rival—

Mellilotus alba—and is a great favorite with the bees; neither does it grow half so tall, nor so rank; the stalks are finer, and the bloom more abundant.

From my experience in saving the seed of these clovers, I think it beats easily. While at a seaside resort I noticed a few plants of this clover growing on the edge of a salt marsh. I made a little cotton sack, and every day I gathered the seed as it ripened. When at my rooms I kept it in a valise; none of the seed grew. If I had dried the seed in the sun it might. I made the same mistake while gathering the seed of the white sweet clover in Iowa, while there on a visit. Any one who fails to grow this clover should transplant a few plants, and if they grow, it will be establisht for all time. It appears to thrive best when beaten well into the soil, and wagon-wheels during a muddy time plant the seed along highways for miles. Some of the railroads have ascertained the fact that it is a good plant to keep their cuts from washing; and it would be good for the South to plant it on their gullied lands.

MRS. L. HARRISON.

Peoria Co., Ill., May 31.

Rolling in the Honey.

Bees in Tulare County are doing well. I have 48 new swarms so far, making 98 colonies in all. They are rolling in the honey now from alfalfa bloom. I believe this will be a good honey-year in this county.

Tulare Co., Cal., May 19. DAN CLUBB.

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CHAS. F. MUTH & SON.

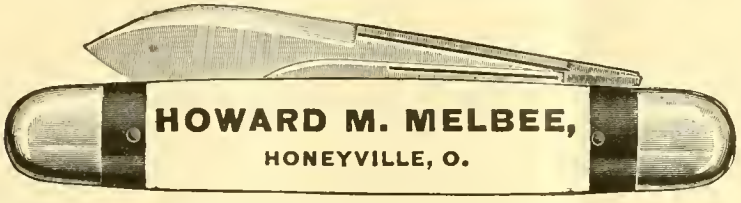
I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)



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Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 8.—Not any new comb on the market, and some of the amber and dark grades remain unsold. Extracted sells upon arrival—white at 7@8c; ambers, 6@7c, according to quality, flavor and package. Fancy white comb would bring 13c; off grades of white, 11@12c; ambers, 10@11c. Beeswax, 27c.

R. A. BURNETT & CO.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, May 31.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7½@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Supplies and demand are both light. Small quantities of new crop extracted, light amber, have been placed to the retail trade at 6¾@7c. Old honey is still on market.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

KANSAS CITY, May 15.—No. 1 white comb, 15c; fancy amber, 14c; No. 1 amber, 13½c; fancy dark, 13c; No. 1 dark, 12c. White extracted, 6c; amber, 5½c; dark, 4@4½c. Beeswax, 25c.

C. C. CLEMONS & CO.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & CO.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it. PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.

M. H. HUNT.

WHEN YOU WANT ..QUEENS.. Send us your order. We will fill it by RETURN MAIL, with the best of Italians, large yellow Queens, healthy and prolific, workers gentle and the best of honey-gatherers. Tested Queens, $1.00 each; Untested, 75c; $8.00 per dozen. Send for our price-list, and see what others say.

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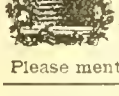

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TERRAL BROS. Lampasas, Lamp. Co. Tex

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Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

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with fence and plain sections, and a full line of other
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A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
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Smokers, Sections, Comb Foundation And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

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Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
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To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.
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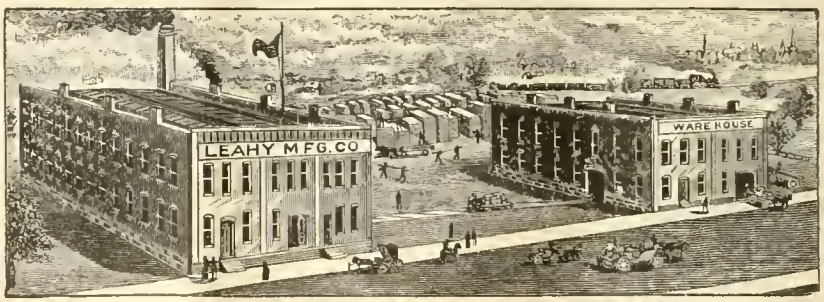

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JUNE 22, 1899. No. 25.

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CONTRIBUTED ARTICLES

Ants—An Interesting Nuisance—How to Get Rid of Them.

BY PROF. A. J. COOK.

I AM requested by a subscriber to the American Bee Journal to write an article on these little insects, which have been famous in prose and poetry all down the ages. It is not strange that the bee-keeper should wish to know more of the ants. Next to bees—and perhaps we do not need to make this exception—the ant certainly stands at the head of the insect world, as does man at the head of the Vertebrate branch.

Again, ants are quite like bees in the economy of their society. The bee-keeper is also interested in the fact that the ant is quick to discover honey-dew, and such insects as secrete it. The ant also becomes sometimes the enemy of the bee-keeper in that it enters the hive and causes no little disturbance. It is even reported that the ants sometimes destroy the queen-bee, tho I have never had satisfactory proof that such is positively true. While it may happen, I doubt if it is ever a common enough occurrence to cause alarm or even disturbance.

The ant, like the bees, many of the wasps and the white ants, which belong to a different order of insects, are truly social. They live in large colonies and work together, each for the good of all. They live for the most part in the ground, tho some of the boring ants live in the holes which they bore in trees. Sometimes they fairly tunnel the trees, cutting them so extensively that they are honey-combed. I have never seen trees bored by any insects more thoroly than by ants. Even the white ants of tropical regions do not their work more perfectly than do some of the true ants which we are now considering. In every formicary, which name is used to designate a colony, there may be found not only the queen, male and worker, but also soldier ants, which are the protectors of the colony.

The ant belongs to the family Formicidæ, hence we understand why a colony is called a formicary. In the winter only worker ants, queens and soldiers are found in the nest. As with bees, when spring comes drones and young queens are reared. These, unlike the workers and soldiers have wings, and in spring or early summer fly forth, often in great numbers, to mate. The drones, or males, die at once after mating, as do the drone-bees, but the queen is taken possession of by workers, ready to emigrate from the old home and form a new one, is conducted into some subterranean retreat, and thus a new colony is formed. The first thing the workers do is to bite the queen ant's wings off, so she must perforce stay at home. We see then that the bee-keeper has a precedent set him by the ants in favor of clipping the queen's wing.

The food of ants is both insectivorous and vegetable. We often see them carrying insects to their nests, and as every one knows, seeds form quite a prominent part of their diet. Indeed, the agricultural ant of Texas, clears the ground, sows the seed, and raises its own grain. These ants also mound about the entrance to their tunnels on low ground, to keep out the water. In case water enters and their stores of grain are wet they carry it out to dry that it may not injure by fermentation. Thus we see that the ant even seems ahead of bees in its functional development.

Ants also make slaves of other ants, and some have carried this on so long and so generally that they have lost the power to care for themselves, except as they secure these slaves. Some ants bridge or tunnel streams, and it is authentically reported that in India, where some leaf-eating ants do great damage, they practice division of labor. They work by night, and some ants go up the trees, cut off the leaves, while other ants carry these latter to the nests.

In Colorado there is a strange development of some of the ants into storehouse forms. Each ant is little more than stomach and legs, and always attaches to the rock in its cave home, where it receives honey-dew brought in by the other ants, and so is a sort of honey-comb for storing this nectar. As the other ants want this honey they receive it from the storehouse ants, much as we see bees yielding up honey to others of the colony. The Indians use these for desert, manipulating the ants much as we do grapes, as we use them for like purpose.

I stated before that ants often show us the presence of honey-dew, and so of plant or scale lice which produce it. Indeed, it is rare to see ants going up or down trees, bushes or other plants, where, upon examination, we will not find plant-lice or scale insects if we carefully look for them. It is probable that the insects sccrete the honey-dew to attract the ants, bees and wasps, and thus protect the honey-dew-secreting insects from birds. The birds will not come near the plant-lice or scale insects when guarded by these bees, wasps, etc. The ants have learned so well the good office of plant-lice that they frequently keep the plant-lice in their homes, feeding and caring for them that they may receive this nectar which the plant-lice secrete. When disturbed, the ants will frequently carry out the plant-lice before they do their own brood.

I have stated above that the ants frequently enter the hives and greatly annoy the bees. Every bee-keeper has had many cases of such interference. In some sections of the country the hives are set high from the ground to prevent this intrusion of the ants. I have had reports from the Southern States that the ants occasionally destroy the queen-bee, which, as suggested above, may occasionally be true, but I think there may be some doubt about it.

Ants are often a serious annoyance on our lawns, and by getting into the house, where from their small size they are able to seek out almost every article of food. It is not difficult to prevent such intrusion. In case of disturbance on our lawns, if we search out the anthills we may easily destroy the ants by the use of bisulphide of carbon. By use of crowbar or other rod (wood or iron) we make a hole into the anthill, reaching to the bottom, which the softer ground enables us easily to find or determine. We now pour in a teacupful or so of bisulphide of carbon, cover quickly with clay, and compact this so as to prevent the poison from passing off. The liquid quickly vaporizes, and being held in the nest destroys all the ants that are in the tunnels. This should be done when the most of the ants are in the nest.

I have found the best substances to repel ants from the house to be corrosive sublimate and buhach, or insect powder. The corrosive sublimate may be brusht along the floor where the ants enter, or strings may be dipt into it—carpet-rags do well—and laid along where they will obstruct the ants' path. The ants seem so averse to this substance that they leave at once. Dusting with the buhach also clears them out, but the treatment may have to be repeated every week or two. We have been troubled not a little with ants in California, but have found the above methods very efficient in ridding our houses of this pest.

Los Angeles Co., Calf.

The Sting of the Honey-Bee and Its Use.

BY C. P. DADANT.

THE sting of the bee, as well as that of other hymenoptera, is practically a sharp double sword, well sheathed when in the body, and protruding beyond that sheath when in the act of stinging. Those two blades are barbed, and when once driven into the wound—which is done usually by an alternate motion of the two darts—are as difficult to extract as a fish-hook would be. When the bee stings, if it is left alone, and the sting has not been driven too deep, she will extract it out of the wound by turning it around and around, which probably twists the barbs and presses them against the blade, allowing its withdrawal.

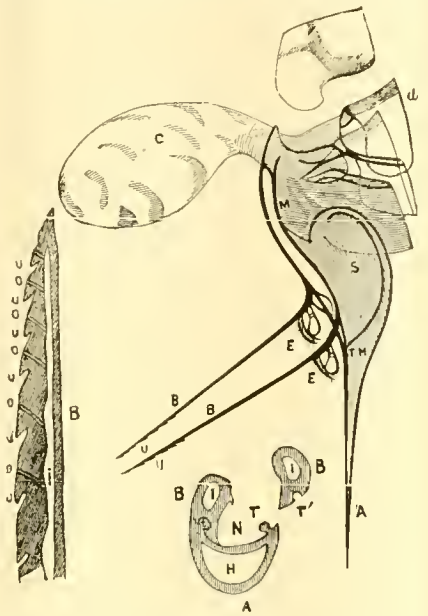
The poison is a transparent liquid of great venomous power—more deadly than that of the rattle-snake, for the latter may be taken into the stomach with impunity, while that of the bee would cause sickness. Reaumur and Della Rocca both report it as burning the tongue almost like scalding water. A. I. Root compares its strength and taste to a compound of cayenne pepper, onion juice and horse-radish. So the only reason why the sting of the bee is not more dangerous is that the quantity of venom ejected is so very minute. In fact, the pain caused by the sting is greater or less according to the quantity of poison forced in. Were it not for this poison, the wound made by the sting would hardly be perceived. It is therefore of great importance that the sting of a bee be removed promptly, especially because it has a spasmodic action, even after it has been separated from the body of the bee, which continues forcing poison into the wound until it is nearly all ex-

hausted. But in taking it off great care must be exercised not to press it or pinch it, as the poison-pouch would thus be entirely emptied into the wound. It should be brusht off or scraped off without a second's delay. The smell of the poison is very noticeable, and reminds one of the smell of ants, for it is indeed very similar to formic acid. This pungent smell irritates the bees, and adds to their irascibility.

But if the sting of bees is a dangerous poison, it proves to have also medical properties, like most violent poisons. It is a well known fact that it has often cured rheumatism. At least numerous reports of such cures have been made at different times by bee-keepers thru the papers, and this is doubtlessly not without good foundation. But this is a "heroic remedy," and very few people will be willing to get stung experimentally for this purpose, unless they be as indifferent to stings as Reaumur, the great entomologist of the XVIIIth century, who relates in his book having caused a wasp to sting him at three different times in succession, just to see whether the wasp would be able to furnish as much venom at the last as at the first. He found, as might have been expected, that the last sting was not painful because the venom-sac had been emptied by the two previous punctures. He says that at a fourth trial he

EXPLANATORY.

C—Poison-sac.
A—Awl.
U, U—Barbs.
I, I—Hollows in lancets
T'—Groove in lancet.
M—Tube from sac to reservoir.
B, B—Lancets.
O, O—Openings from hollow in lancets.
S—Reservoir.
E, E—Valves.
H—Hollow in awl.
T, T—Ridges in awl.



Sting with Lancets drawn one side, cross-section of Sting, and a Lancet, much magnified.

could not succeed in inducing the insect to sting again. The poor wasp had evidently given it up for a bad job.

The queen-bees have a sting, but it is small, curved, and used only in fighting with rivals. A number of experimenters have reported being stung by queens, and in every instance the sting was said to cause but little pain. The poison-sac of the queen is like her sting—of secondary importance.

What is the necessity of so dangerous an "arm" as the bee possesses? Is it solely so she may be able to defend herself against us? This is not probable, and altho it is possible that without such a weapon the bees might long ago have been destroyed by man's rapacity, so as to disappear entirely from the earth, yet this weapon is necessary to them to protect them against many other enemies. There are a number of honey-eating insects that are both larger and stronger than the honey-bee, and some animals, like the bear, are so fond of honey that the fear of the stings alone can keep them away. But in their own hive the bees need a weapon. Were it not for that weapon, it is quite probable that those big, burly drones that are reared every spring with such care, and so mercilessly destroyed in the fall, would take advantage of their size to live on thru the winter at the expense of the workers, and with the great risk of starving them out.

If they are well armed for attack, our bees are also well fitted for defense. As many a combat takes place between inhabitants of different hives, owing to the greed and pilfering dispositions of many bees when the honey season is at hand, if one bee could readily pierce another with its venomous sword, great mortality would ensue. Luckily Nature has drest them in an armor—a coat of mail—the ordinary shell of most insects, made of a horny substance called "chitine." So it is only in the joints of this armor that the bee is vulnerable, hence the long fights between inhabitants of different hives, and the ease with which the robber often gets away.

Hancock Co., Ill.

Putting Up Extracted Honey in Glass Packages.

BY C. DAVENPORT.

SOME one has said in effect that it might be of benefit to others if we would describe our mistakes and failures, so I am going to mention how I lost about $70 besides much time and work. Still, the matter could hardly be called a failure, for a most singular success was attained, but not just in the manner expected or desired.

When commencing to put extracted honey on the market the best style or kind of package was with me a matter of much perplexity, and after trying many and various kinds of packages, I finally decided that the Mason glass jars, in their various sizes were, all things considered, about the most satisfactory packages that could be obtained here for the retail grocery trade. The glass itself, barring accidents, lasts an indefinite length of time, and as the caps or covers are made of zinc they do not rust, and if they become discolored or old-looking there are a number of preparations by which they can be very quickly and easily cleaned so that they look as bright as when new. On this account these jars, after being emptied, represent, or are worth, about as much money as when new—something that can hardly be said in favor of any other retail package with which I am acquainted, and usually even the most thrifty of housewives will hardly object to the cost of the jars, owing to the almost universal use that is made of them by all classes for canning fruit.

But I found one great objection to their use, and this was that soon after they were filled the honey would ooze or run out enough around the rubber ring to keep the jar sticky. At first I thought the rubber rings I had must be defective, or of poor quality, but I found out, as undoubtedly every one else has who has used this style of package, that with no kind of rubber rings can honey be sealed so but what enough will escape to keep the package sticky, and this makes it, aside from being disagreeable to handle, very objectionable in other ways, for it catches and holds the dust and attracts flies and other insects, and on this account I found a number of grocers who, after a trial of them, refused to handle or have anything to do with them.

So I went to work and tried to make some kind of a band or ring that would hold honey, and the expense I have mentioned was for dies, material, traveling expenses, etc., during the time I was working at this.

I had a long talk with a man who bottles up tons of extracted honey each season; he uses corks and sealing-wax, and said a wide-mouthed jar with a screw cap was preferable in many respects, but he had found the same difficulty I have described, and had tried rings or bands of different material, but without success. He said it was the action of the acid in honey that made rubber rings defective for sealing.

I did not say anything about the work I was doing in this line, for I expected to meet with success, obtain a patent, and soon be able to spend the winters in Florida, or even start a new bee-paper, if I got more money than I could conveniently spend otherwise!

I will not take space to describe the various work and experimenting that I did, for I found out that if an ordinary rubber ring was dipt in melted beeswax the whole problem was solved, for if the rubber is dipt in wax not a particle of honey will escape, no matter, I believe, how long it is left sealed. I have kept clover honey sealed nearly a year before it candied, and not a trace of honey could be detected on the glass, and the jars were kept bottom side up on purpose to test the matter.

These jars and covers are at present made very cheaply, and sometimes the cover, or rather the underside of it, does not fit down close enough to the glass to enable the ring to seal it tight all around, in such cases of course the defect in the cover has to be remedied, or if not too bad by using two rings it can be sealed tight.

Before filling the jars with honey, or dipping the rings, I look the covers over, and if any are not true, I have a device made to bring them in shape. I then test them by putting some water in a jar, then put on a ring and the

cover, and if no water will leak or can be shaken out, they are all right for honey. I have said this was done before the rings were dipt, for the reason that after they are dipt in the wax, and the cover has been screwed down tight on them, and then taken off, I found in a few instances a trace of honey would escape if the same rings were used without being dipt again.

The wax should be boiling hot when the rings are put in, and they should be simply dipt, and not soakt or cookt in it. Paraffine might answer as well as wax, but it takes such a small amount of wax that the difference in price would hardly amount to anything unless a very large amount of honey was to be put up.

I think there is no doubt but what some kinds of fruits and vegetables contain acids that also act on rubber so that it does not keep the contents of the jar air-tight, and I believe it would pay those who seal fruit by means of a rubber ring, and have trouble because the fruit "works," as I have often heard it called, to give this matter of dipping the rings in hot wax a trial.

This matter is, tho, of but very little interest to me, for I haven't one of those "queens" that are able to put up fruit, and the last two years I have sold what little extracted honey I produced direct to the consumer. Last season I sold at the yard about 1,800 pounds, and could have sold more. It was sold at a low price, but it brought me more than it would if I had shipt it to some city market, or more, counting my time, than I could have gotten for it from grocers. Southern Minnesota.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

HOLDING THE BREATH TO PREVENT STINGING.

As to that impenetrability theory, on page 294, let every one who inclines to accept the truth of it experiment on his own skin with a fine needle (not so sharp as a bee-sting, but mayhap 'twill answer just as well), and if the needle refuses to go in while you are holding your breath, perhaps the bee-sting will also snub up and refuse to penetrate. But Mr. Raymond is all right. Breathe gently or not at all when your face is close to cross bees; and in extreme cases turn your head away when you must expire.

Per contra, when bees are not particularly cross, I sometimes use my breath instead of a smoker to make them "git furder."

There is a rationale to the hum in that clipping, and it is this: Most stings which laymen get they bring upon themselves by striking or puffing; and if they were trying *any experiment* that would keep them from doing exasperating things, they would not be stung at all. Some like the old Scotch wizard's magic drop which, held in the mouth while one could count a hundred, made angry husbands mild.

SHALLOW EXTRACTING-FRAMES.

'Tater doesn't think much of shallow extracting-frames, but he's aware he doesn't know much about them—also aware that in a free country others have a right to sit up with them if they want to. If they are to be used, it is fortunate, as Mr. H. H. Porter has found, on page 302, that there is an extractor kept in regular stock that will hold two of them in each basket. As to objections, besides those which readily occur to the mind, bees often hold five or six inches of the lower center of the comb "empty swept and garnisht" in hope that the queen will come up and lay there. With a shallow comb there would only be a little honey in the ends, it seems to me.

WINTERING BEES—SMELTING WORKS.

Mr. Lovesy's contribution to the wintering problem, on page 302, may be important. Some things relative to wintering we are already pretty well at agreement about—as the transcendent importance of good stores, and the desirability of occasional flights; but it is still disputed as to where pure air stands in relative importance. Those who reason down from human sanitation to bees naturally incline to one side, while those old practicals who have wintered bees by burying them incline to the other—even if they don't say right out that pure air is of no more importance to a bee than it is to a bedbug. Well, Mr. Lovesy is a man among bee-keepers, and his settled judgment and observation is that bees will not winter at all very near to smelting works which pollute the air with ill gases, and very poorly at considerable distances—even as far distant as his own home is. This seems to show that the bee is more sensitive to impure air than human beings are. Did he lose half the inmates of his home every winter he would be getting out of that. Of the bees he usually loses about half, while at out-apiaries remote from smelters they winter much better with the same preparation.

GIVING SWARMS DIRTY COMBS.

On page 295, Dr. Miller is all right, that combs of simple dead brood (in a *region* where there is no foul brood) may be given to new swarms; yet it would be well to set "Ohio" right as to *how* to give them. He proposes to hive the swarm directly on them, which is not "orthodox." To hive a swarm on, use preferably the best combs at hand for outside combs, and frames with starters or fragmentary combs for middle. Let things stay in that shape till near evening of the second day; *then* put in your dirty old ones in place of the previous combs or starters. If you want to give a full set of dirty combs, make about three spells of putting them in, on different days.

SECTION-CLEANING EXPERIMENTS.

C. Davenport seems to be at his best, on page 293, where he gives his manifestly considerable experience in cleaning sections. Queer that so many use sandpaper, and all his sandpaper efforts were failures. Quite likely he is right, that the propolis of some regions is much more sticky and difficult to adapt a machine to than that of other regions. Also, I would add, the propolis of September is much more dauby than that of July. And probably, too, some have reported success when they have not cleaned more than a dozen sections as a basis for their report. And so it is rapidly revolving nutmeg-grater for edges, and rapidly revolving knives for flat surfaces. Why not give up the kinds of super that let bees get at any flat surfaces?

SQUARE CANS VS. BARRELS FOR HONEY.

G. W. Wilson (page 290) would fain have barrels instead of square tins because they are easier to handle. Founding too much on his reason. A couple of square tins boxt is not nearly so hard to handle as a red-hot cooking-range; and if it's the best package I guess we had better contrive to handle it somehow.

DIFFERENCE IN HONEY AND BEES.

"Many men of many minds." I like the plump impudence with which W. H. Eagerty says there is as much difference in the honey of different strains of bees as in the butter of different breeds of cows. Page 292.

AN EGG-SCATTERING QUEEN.

"When a queen scatters her eggs pinch her head." Henry Alley, who says this, is one of the oldest and foremost authorities on queens. Her majesty should lose no time in deciding that she can do a little better on a pinch.

A QUEER SPRING AND BEE.

When Prof. Cook reports from California that early flowers are late and late flowers early, I guess we shall have to admit that the spring of '99 was a queer spring. And also queer is that bee with one eye centrally located. Page 307.

FLAVOR OF BASSWOOD HONEY.

When we strike a new scheme that's surely going to be gay, how sure we are to omit some little item necessary to success. Mr. Gross, page 290, furnishes an excellent illustration. He saw extracted honey sell for 24 cents a pound in Switzerland, and thereupon sent some. Didn't occur to him that folks in Europe are not accustomed to the flavor of basswood honey. 'Tater thinks that that strong minty flavor he speaks of in old basswood honey is caused by being extracted too soon. Thick, *thoroly*-ripe basswood honey is delicious when it is old.

AGAVE AND ITS HONEY.

"Nasty" color and mean smell are considerable drawbacks for an ornamental plant. A fluid dram of nectar drawn at one time from four flowers an inch across is "some." These meditations are on the agave plant as

drawn by Mr. Pryal, page 305. He doesn't seem to know whether agave honey is good or bad—few people know, perhaps.

ANENT THE SPELLING REFORM.

"Buki Rold Ots," eh? This is undoubtedly an argument—but an argument greatly overworkt—the *look* of words to the eye. Arabic and Chinese print looks repulsive to us, yet attractive to scholarly Arabs and Chinese. And a few years of scholarly attention to Arabic would make its writing look singularly and wonderfully graceful to us. Familiarity, tho not all, is nearly all in this case. Unfamiliarity could no doubt make "Buckeye Rolled Oats" a laughter-provoking line.

DR. MILLER'S EXPERIENCE WITH QUEENS.

I find information for myself in Dr. Miller's experience on page 311—several queens put over a hive to be warmed and fed. The result was the free queen was killed. Bees proceeded on the principle followed by Mrs. Stowe's grandmother, who whipt the innocent boy she could catch because she was infuriated at a rogue that was too nimble for her. Quite likely some harm results, in the form of decreast laying and brood-rearing, in many such cases where the queen is not killed.

GROWTH IN MARKETS FOR HONEY.

Let us have a grain of courage now and then. What's the use of chanting an endless Jeremiad about the failing honey market? This is anent the editorial note on page 312, telling how New York's consumption of honey has risen from 20,000 pounds to 6,000,000 pounds in 38 years—300 fold. We can hardly expect the metropolis to rise another 300 fold; but much of the country, and many towns, *could* do just that. All the trouble was that while consumption grew production bounded—and superabounded. Growth will go on; but the bounding has about stopt.

ADULTERATION OF FLOUR AND SUGAR.

The adulteration of flour with heavy minerals, as related on page 313, is surely a little worse than the adulteration of honey. And if powdered sugar is almost always largely cornstarch, that has an important bearing on the provisioning of queens for journey. COGITATOR.

CONVENTION PROCEEDINGS

Report of the Utah Bee-Keepers' Convention.

A very interesting meeting was held by the Utah Bee-Keepers' Association, April 8, 1899, in Salt Lake City. Pres. E. S. Lovesy calling the convention to order.

The minutes of the October meeting were read and approved, and the following officers were elected for the ensuing year:

President, E. S. Lovesy; 1st Vice-President, George Hone; 2nd Vice-President, R. T. Rhees; Secretary and Treasurer, J. B. Fagg; and Assistant Secretary, G. E. Garrett.

The following County Vice-Presidents were chosen:

Salt Lake County, F. Schach; Utah, Wm. Peay; Wasatch, J. A. Smith; Davis, W. E. Smith; Box Elder, J. Hansen; Weber, O. Folkman; Juab, Thos. Billston; Sevier, C. Canutesen; Washington, Mrs. Woodbury; Tooele, B. Barrows; Cache, Henry Bullock; Morgan, T. R. G. Welch; Millard, S. Teeples; and Emery, Cris Wilcock.

The President's Address.

The outlook for the bee-industry this spring, as far as Utah is concerned, appears to be more favorable than last year. The season last year was short at both ends, the spring was cold, stormy, and late, and while there was a good flow of honey in many parts of the State, it did not keep up as long as usual, especially where the supply of irrigation water was not abundant.

One of the most gratifying features of the industry last season was the firm demand for our products; and the indications are that the demand will be equally good this season, without any regard to the extent of the honey crop. Our bee-products have been pretty well advertised, and Utah honey is considered par excellence on all markets where it has been sold.

Right here is a point that should be considered: Our bee-keepers should be better organized for the disposing of our products, at least. The old adage, "Every one for himself and Old Nick for the whole," is foolish in this respect, for it often causes a stupid and unnecessary falling of prices. We understand the motto, "By industry we thrive," but if we could put that other grand one in force, "In union is strength," it would be better for all concerned.

Some localities have been considerably overcrowded. There is plenty of unoccupied territory, thus bee-keepers seeking a location for an apiary should carefully consider this question. No one need to envy bee-keepers; as a rule they well earn all they get. Who ever heard of a millionaire bee-keeper? He often flatters himself that he has past the rapids safely to fair sailing, only to be upset and wreckt in the "Slough of Despond." While with proper management it is possible that the bee-industry may be one of the best paying industries in the agricultural line, the few that attain the summit of success do so by an unceasing determination never to give up. Like many other pursuits, bee-keeping is subject to many accidents and disappointments. In some parts of the country we find the winter question one of the most difficult to solve. While it is impossible to give all the causes and remedies, and while location has much to do with this question, protection combined with sufficient ventilation must be observed in the north and central parts of the State. Smelter smoke also seems to be very injurious to successful wintering of bees.

I have received several letters this winter and spring from different parts of the State in regard to losses and trouble thru foul brood, but this matter is in the hands of the bee-keepers in the several counties. The present law will amply protect all bees and bee-keepers, if they will petition their respective county commissioners.

E. S. LOVESY.

Considerable discussion and praise was indulged in in regard to the fine quality of the Utah honey exhibit at the Trans-Mississippi Exposition at Omaha, in 1898, and a general invitation was given to the bee-keepers to exhibit their products at the State Fair next fall.

Christopher Wilcock, of Emery County, gave his experience with foul brood as follows:

Foul Brood.

This is an infectious disease, but is confined solely to the brood, and does not affect the bees. Wherever found it should be dealt with earnestly and with dispatch.

If the colony is weak, I should recommend smothering the bees, and in order to do this without letting a bee escape, take a tablespoonful of sulphur and place it in the entrance of the hive. If there is any breeze, turn the hive so it will blow in the entrance. Then fire the sulphur and it will soon exterminate all the bees. This should be done early in the morning, before any of the bees are flying, as one bee escaping from the hive might carry the disease to any colony with which it may take up its abode.

If the colony is a strong one, I would keep the entrance partly closed so as to prevent any other bees getting in.

Then, as soon as fruit-blossoms come out, so the bees can obtain honey, I recommend saving the bees. In order to do this, and cleanse them from infectious disease, I procure an empty box of any kind, then search out the queen, if possible, and put her in a screen wire cage, which is easily made by taking a small piece of screen, roll it up and tie a string around either end, and place the queen in it, with two or three worker-bees for company; cork them up, and place them in the box, then shake all the bees out of the hive into the box. This should be done either in the evening or early in the morning when the bees are not flying.

Then hold the queen in this box for from 24 to 48 hours, allowing the bees to fly out and in this box as they please. Then take a clean hive with good combs and foundation, and put the bees into it, and they will be free from the disease.

Then take the combs of the diseased hive, and melt them for wax. Be sure to bring it to a boiling heat, which will purify it. Wash the hive thoroly with boiling water, and also everything pertaining to it that you wish to use again. My experience is that this method strictly carried out will effect a cure. C. WILCOCK.

E. S. Lovesy said that with the excellent law that Utah has on this subject, and with the improved methods of handling the disease, there should be no serious trouble in

keeping it down. Our law is so well worded that our bee-keepers don't have to wait for days or weeks before it can be applied; and while it can remain dormant when not needed, it can also be applied for the benefit of any bee-keeper in any county, and at any time, by making application to the inspectors in their respective counties or district. There doesn't seem to be any trouble in regard to the matter except in a few places where the bee-keepers have not taken action to get the law in force. Probably if the bee-keepers thru the State will take an interest in the matter for their own benefit, it is possible the whole thing could be stampt out.

Some very interesting remarks were made by Vice-Presidents Hone and Rhees, and also by Mr. Teeples and others, on the wintering of bees on the summer stands, and also by the house and cellar methods. They also showed the necessity of ventilation to prevent dampness.

Messrs. Schach, West, Dudley, and others spoke on the necessity of a more united action in the purchase of supplies, and in disposing of the bee-products. Mr. Folger and others spoke on the best shape and style of hives, and also in praise of Utah honey.

Messrs. Hone, Fagg, Garrett and others gave their views on the foul brood question. They claimed that all bee-keepers, as far as possible, should study this subject for themselves. After some further remarks by several members on general topics the meeting adjourned until October, 1899.

It was one of the most largely attended meetings ever held by the Association—some 30 members being present; and the interest and participation in the proceedings were general. It is hoped that it will be the means of forming a stronger bond of union among the bee-keepers of the State.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Pure Italians, Five-Banders and Albino Bees.

On page 306 appears a series of questions for me to answer, which would have been answered sooner if the editor had sent them directly to me instead of first putting them in print. In order to save room I'll not repeat the questions but answer in order:

1. I have seen Italian queens that I had good reason to believe came from Italy, and I have seen their progeny, all of which I believe to have been pure, but I don't know that I ever saw a worker-bee that first saw the light in Italy.

2. I use the word "pure" in its usual sense, a pure Italian being that which is unmixt with something that is not Italian.

3. I suppose changes come about in bees as in other things. The people in the world don't all look just like Adam and Eve, altho I believe Adam and Eve were pure stock. The more fixt the type, the less likelihood of changes. I do not believe pure Italians are so fixt in character as pure blacks, hence it is easier to breed different strains of Italians. While it may be true that the Italian is not a pure race, I should consider it hypercritical to say our queen-breeders had never bred pure Italians.

4. As I said before, I don't know that I ever saw any bee except a queen that came from Italy. But I believe that there are also workers and drones in Italy.

5. As I don't think I ever saw a worker-bee that came from Italy, I can hardly tell much about its color.

6. I have seen a great many bees with three yellow bands that were the progeny of what I believe were imported queens.

7. I mean by "bands" the same as is meant by the word as used in general by all writers on bee-culture—the segments or stripes of the abdomen.

8. Yes, I saw that question-mark.

9. Yes, I have seen a great many single bees from an imported queen that had three yellow segments.

10. No, I don't know that I ever saw a single bee from an imported queen that had three segments all of a maroon color. In fact, I think the color was always more nearly yellow than maroon, perhaps the color of yellow ocher. It is possible, of course, that I may be mistaken as to the matter of color, having no specimen before me, but that's as nearly as I remember, and I think all the authorities that I've read teach the same thing.

11. Not having a specimen before me, I cannot answer minutely your question, but this from Cheshire may answer the purpose in describing the three yellow bands: "The first three rings are themselves in large part a transparent, tawny yellow transparent, as may be seen by allowing a bee to fly on the window-pane. The first abdominal ring on the dorsal side mainly faces the thorax, and may be mist by careless observation; its lower edge only is black. The upper two-thirds of the second is yellow, the upper third smooth and hairless, because this passes beneath the ring above it when the body is contracted. A band of yellow hair covers the second third, and adds much to the beauty of the bee, as hairs and ground are alike yellow. The lower third of the ring is glossy black, carrying many mieroscopic hairs, and a minute fringe. The third ring resembles the second, while the fourth and fifth carry yellowish hairs, but are black. The sixth ring, black also, is nearly hairless."

12. I think the tendency of Italians bred in this country is toward a lighter color.

13. I think I never disputed that in the five-banded bees, one, at least, of the bands may have been solid yellow without any black.

14. I don't know that I ever saw a worker-bee with the sixth segment yellow. I think, however, that I have read of workers yellow to the tip so often that I took it for granted that such were in existence. If there are none such in existenee I am thankful for the correction, for there are many things I don't know about bees, but about which I am anxious to learn. Possibly those who spoke of workers yellow to the tip were speaking in a slightly exaggerated form, somewhat as you do when you speak of a worker appearing like "a lump of gold." We mustn't be too hard on them.

15. I have seen what was called an albino bee.

16. I think the part that lackt the coloring-matter was the hairs.

17. If you mean the coloring of the chitine, I don't think that there was any change in that in the albino. A lack of coloring-matter in the hairs made the bands or segments lighter.

I said that "albinos among bees are much the same as albinos among the human race—bees which have been so bred that the coloring-matter is somewhat lacking." If I had stopt at the first half of that statement, there would be some show for pretending to think I meant a bee milky-white all over, but as I immediately stated in the last half that I meant "bees so bred that the coloring-matter is somewhat lacking," I think my statement is entirely correct.

If I desired to be as critical with your writings, I think I could find some spots that would not bear that kind of scrutiny. For example, you say, "I had supposed that the abdomen of each bee was composed of six horny segments." Now, if I wanted to pick at that, I might say, "You are quite mistaken if you think there is nothing of the abdomen but six horny segments. There is the framework or skeleton composed of chitine, inside of that a whole lot of inwards, and outside more or less hairs or down." But I don't think it would be very nice of me to talk that way. I think you and I will do well not to descend to hypercriticism.

C. C. MILLER.

Building Comb in All Shapes.

I have ¾-inch starters in my extracting-supers, and the bees are beginning to build comb. Some begin on the starters and some on top of the bottom-bars and build up; and some build rather across the bottom-bars—all shapes. What's the matter? What must I do? SO. CAROLINA.

ANSWER.—Very likely the reason for your bees doing as they have done is the great distance from the brood-nest to the starters. If the frames in the super are of the same depth as in the lower story, it's a pretty long stretch from the brood-combs to those ¾-inch starters. So the bees build up from below, just as they would if no starters were present.

If you will persistently tear out all the work they do in

the wrong place, leaving only that which is begun on the starters, they will finally give up and build where *you* want the building done. But after they commence working in a certain way they are somewhat stubborn about changing. There would probably be no such trouble if the frames were entirely filled with foundation, or even if two of the central frames were thus filled. You will make a very sure thing of it if you put a comb of brood in the extracting-super (on the supposition that the super takes the same size of frames as the brood-chamber), either a comb filled with brood or honey, or an empty comb. This comb may be removed, if you so desire, after the bees have begun work thoroly in the super.

Selling Honey Cough Medicine.

I make a very good cough medicine of honey, and have so many calls for it that I cannot afford to give it away any longer. Would I be liable to a fine if I should take a few cents for each package to cover expense? If the law in regard to making and selling medicine is likely to be different in Minnesota than in Illinois, whom should I consult to find out? MINNESOTA.

ANSWER.—The probability is that there never would be any trouble about your selling a preparation of the kind, but any lawyer or justice of the peace ought to be able to tell you about the law in your State.

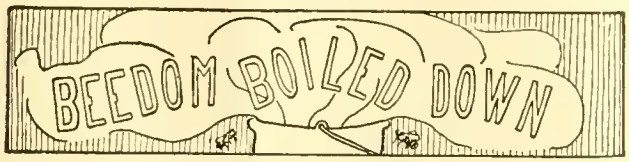
Using Moldy Combs—Sun Wax-Extractor.

1. I had two colonies of bees that died, and some of the honey is sour and working. Would it be all right to let the bees clean it up and then hive bees on it when they swarm? The combs have a lot of bee-bread in them, and there is a lot of mold where the bee-bread is. Will the new swarm clean it out, or what should I do with the combs? I wintered my bees in the cellar.

2. How can I make a small sun wax-extractor? IOWA.

ANSWERS.—1. Don't put a swarm on these combs that are sour and moldy, for fear the bees would object and abscond. But let the bees first clean them up, and then they will be all right for swarms. The best way is to put a hive full of the combs under a strong colony. Do so toward evening, so that robbers will not trouble, especially if bees are not gathering much at the time.

2. The simplest and cheapest way to make something small is to take an old dripping-pan torn open at one end, or almost any other dish of the kind, or even a piece of old stovepipe flattened out, put it in a box and have it slanting enough so the melted wax will run off one end, and have a dish beneath to catch the wax, then put the bits of comb on this upper surface and cover the box with a pane of glass, setting it in a sunny place, preferably beside a south wall.



Wax from Foul-Broody Combs, the Editor of Gleanings in Bee-Culture thinks, should not be rendered because of the possible danger of infection. Surely it is better to err on the safe side. Better burn all such combs and run no *possible* risk by having such wax made into foundation.

Buckwheat in Dry Weather.—Editor Holtermann, of the Canadian Bee Journal, has had experience in moving bees for fall pasture, particularly to buckwheat fields, and he says it is not worth while to move to buckwheat fields, especially those on sandy soils, if there is a prolonged dry time.

Immunity from Foul Brood.—Prof. Henry W. Brice gives in the British Bee Journal as one of the most interesting facts in connection with the subject of foul brood, the immunity of certain colonies in an apiary, even in centers where the disease is widely prevalent. This may be chiefly attributed to the very healthy condition of the colonies, but let chilled brood be found in one of these colonies, and the unhealthy condition thus introduced makes the immunity cease. Perhaps it is the stretching of this a little too far that makes some good men believe that chilled brood may of itself originate foul brood.

Coffee and Honey.—A writer in Bee-Chat says that in Jamaica a large amount of honey is stored while coffee is in bloom, there being three or four blossomings of three or four days each in a season. On a coffee property where 100 colonies of bees were kept there had been no light coffee for two crops, while 8 or 10 miles away they had 40 to 50 bags of light coffee.

Somerford's Plan of Forming Nuclei, lately mentioned as having been given in Gleanings in Bee-Culture—by shutting up the nuclei with green leaves till they gnawed their way out—E. T. Flanagan says in that paper has been much practiced by him, but great caution is needed in warm weather, for he has known many nuclei to be utterly ruined, especially very strong ones, presumably by smothering.

Heavy Loss of Bees by Fire.—Gleanings in Bee-Culture reports that T. F. Bingham, he of the Bingham smoker, had 80 colonies of bees burned by means of a spark from the railroad. No particulars are given, but it may be wise for us to be on guard as much as possible against such things. A bee-hive with its contents burns readily, and it is not well to have hives so close together that fire will readily communicate from one to the other, neither is it well to have the ground between the hives covered by dried grass or other combustible material.

Milkweed Honey.—On page 798 of this journal for 1898, Dr. Miller made a guess that milkweed honey was amber. Clark A. Montague says in the Bee-Keepers' Review it is nearly as light as basswood, a correction that Dr. Miller will no doubt cheerfully accept, as Mr. Montague is in northern Michigan, in a locality where he gets an annual average of 100 pounds per colony, spring count, from milkweed alone! As to quality, he says: "We think it is the best honey we have, altho some prefer the stronger flavors of basswood or buckwheat."

Water for Bees in Spring is the theme that occupies in the Bee-Keepers' Review the department of "Good Things from Other Journals." Dadant's Langstroth is quoted as calling attention to the large amount of water used in brood-rearing in the spring, and the danger that many bees will be lost if obliged to go a distance for it on chilly days. One writer advises to give both fresh and salt water, so the bees can have their choice. Dr. Mason says his bees in the cellar took water greedily at the entrances of the hives, when it was given to them *warm* in a sponge.

Shortened Top-Bars.—When a top-bar is so long that not more than 1-16 inch is allowed for play at either end, the gluing up of this 1-16, more or less, is perhaps the largest factor in making the frames difficult to move. To obviate this difficulty, especially in the case of hives with metal rests in the rabbets, the ends were made shorter, and a staple driven in the end-bar under the top-bar at each end to space the frame endwise. Some fear was entertained that there would be trouble about frames dropping down in the hive whenever they were moved so as not to be square in place. C. Davenport says in Gleanings in Bee-Culture that in actual practice there is no such trouble, and as no complaints have appeared from others he is probably correct. Even when a frame is filled with brood and honey, the ends can be sawed off and the staples driven in.

Travel-Stain has been a matter of considerable discussion lately. After what has been said by J. E. Crane and others, D. W. Heise, in the Canadian Bee Journal, thinks it time to bid good-by to the term "travel-stain" as being misleading. Now comes a brand-new theory with a brand-new discovery of a special secretion by the workers, according to S. P. Culley, in Gleanings in Bee-Culture, which secretion is the guilty culprit in cases where the substance of the comb is colored thru and thru. The honey is also colored by this secretion, which accounts for the fact that honey is darker when gathered slowly. This Boiler does not pretend to have proof that such a thing is impossible, but would be far from endorsing Editor Root when he says it "appears very reasonable." Cheshire's explanation that the coloring is due to the dejections of the larvæ seems a good deal more reasonable.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Shall We Get Apis Dorsata?—Editor Hutchinson, of the Bee-Keepers' Review, expresses himself on this subject in the following language:

"There has been a whole lot publisht in the bee-journals about the bringing here of Apis dorsata. If any one has opposed it, he has been accused of having some personal feeling in the matter. To speak real plain, some folks may not like Frank Benton, and they might not like it if he got the job of going after these bees. If anybody opposes the bringing here of Apis dorsata, somebody else is almost sure to hint that enmity to Mr. Benton is the real cause of their opposition. Mind you, they *hint*; they do not say it right out so that it can be disputed and combated. Some folks may not like Mr. Benton; at the same time he is probably the most competent man to send after Apis dorsata. It is possible that a few, and a *very* few, would oppose the choice of Mr. Benton as the man to send after these bees; but I very much doubt if any man has opposed their introduction on those grounds—even in his own mind.

"I have always opposed their introduction until we know more about them. I am not opposed to progress, nor the introduction of new things of the desirability of which we are assured, or that can be kept under control until the desirability is no longer an unknown quantity."

As we have been among those who have pretty strongly opposed the introduction of Apis dorsata into this country, and as it is also pretty generally known that Mr. Benton has little use for us, perhaps a few words further from this office will be in order.

Firstly, if anybody is to be sent by our Government to get Apis dorsata, we don't hesitate at all in saying that Mr. Frank Benton is the very best man for the purpose. He is the only American that ever succeeded in capturing and hiving Apis dorsata, and perhaps has had a larger experience with foreign races of bees than any one else on earth.

But, secondly, we have contended all along that Apis dorsata should first be thoroly experimented with in their native habitat, and then, if found valuable enough to be worth while, by all means get them into this country. There's where we stand.

"Fashionable Honey."—Mr. L. C. Salsbury, of Bradford Co., Pa., sends us the following taken from the Philadelphia Press, of June 8, with the heading, "Fashionable Honey:"

Honey—and it must be of the newest and most delectable flavor—is claiming just now an unusual amount of attention at the fashionable breakfast table. In fact, its place there is becoming quite as undisputed as that of wines at dinner parties. Men of wealth and leisure are assiduously testing and experimenting with the different brands of honey, and wrinkling their brows over the problem of producing what seems to them the most desirable flavor during the coming summer.

For the bee is no longer allowed to pursue its own sweet perigrinations, and sip of the nectar of flowers wherever it chooses. Its actions are restricted and guided. As a result, such honey as never was tasted before is offered at smart tables.

If it is the white sweet clover flavor that has gained favor with the epicure, he goes systematically to work to produce it; and plants, at his country place, a large plot of ground—perhaps half an acre—with this particular kind of clover. He has it carefully kept from weeds or any other variety of clover that might endeavor to find a footing there. The whole bed is enclosed and rooft with a fine wire netting, and the bee-hives are then placed within the enclosure. Try as it will, the bee can produce none other than white sweet clover honey. In flavor it is very delicate, and almost white in color.

Yellow sweet clover honey is preferred by others. The flavor is slightly stronger than that made from the white variety, and its color is a deep yellow.

Then there is the honey that is made from such flowers as thistles and milkweeds; it is most amusing to hear producers of such flavors tell of their tribulations in making these wayward plants grow within their restriction. Some of the wild-flower honey is almost black in color, and the flavor is certainly very different from what it was in the days when honey was honey, and that fact settled the question.

How is that for a sample of the stuff the daily newspapers are furnisht with? The idea of a half acre of clover, and that rooft with fine wire-netting to keep the bees to work on! Then, whoever saw any surplus honey that they knew was gathered from the yellow sweet clover?

The whole thing is a fair sample of the average newspaper reporter's effusions when he gets outside of his field—that of reporting baseball games, political caucuses, etc. The ordinary newspaper writer should know better than to get very close to the bee-subject, else he may be subject to such a fit as the one must have fallen in when he wrote about "fashionable honey" in such an unfashionable and untruthful way.

Investigation of Adulterated Foods.—On page 328 we referred to the investigation of adulterated foods being conducted in this city by a committee appointed by the United States Senate. That committee is composed of the following senators: Mason, of Illinois; Harris, of Kansas; Wetmore, of Rhode Island; Smith, of New Jersey; and Cannon, of Utah.

After taking a recess of two or three weeks the committee resumed their investigations for a few days, again adjourning on June 8. In an interview publisht in the Chicago Record of that date, Senator Mason was reported to have given utterance to the following very strong language:

"I have been badgered and browbeaten by manufacturers of adulterated foods until I am tired. I have been threatened by political destruction, and been approacht by bribe-givers until I feel it my duty to await the presence of other members of the committee before taking further testimony. There is one concern in this city that has already threatened to ruin me—the glucose trust.

"It is the old story of the flour bill. I stood by the bill for unadulterated flour, and have always believed I compelled its passage. At that time the glucose men did everything in their power to frighten me, or in some other way get me off the track of my purpose. Why, they even went to my son, who was newly wed, and had only a scant home for himself, and offered him a salary of $10,000 a year to act as attorney for them, making the implied condition that he should haul me away from the support of the flour bill. The adulterators of food products are pursuing similar tactics to-day, and that is why I am determined that before the investigation proceeds further, fellow-members of the committee must step in and share the burden of responsibility.

"Testimony that has been absolutely of no value has been admitted by me simply because I did not wish to accept the responsibility of excluding it. I have not wisht to take the risk of having it said that I excluded testimony that might explain alleged evil conditions. I knew the testimony could avail nothing, but admitted it in order that there might be no opportunity for the charge of prejudice. Had there been other members of the committee to support me, this time would not have been wasted. Still, I cannot say that much time has been wasted, because I have gathered enough evidence to form the foundation of a bill to compel every manufacturer of food products to label all food according to its composition."

So the glucose trust is beginning to make its threats. All right; before they get thru it (the trust) will have a few scores to settle with the bee-keepers of this country. Glucose is the principal adulterant found in the so-called "honey" mixtures offered for sale in so many grocery stores in Chicago and other cities, and some of these fine days some one will be compelled to stop that criminal practice, or work for the State awhile for nothing. We believe it will not be very long until we have a strong national law against adulteration, and then we will see whether Mr. Glucose Trust will "threaten to ruin" anybody. About that time it will likely be ruined itself.

The Boston Transcript, some time ago, publisht the following paragraph, which gives quite a little information about glucose, and the extent to which it is manufactured and used as an adulterant in this country:

WHAT GLUCOSE IS MADE OF.—Commercial glucose is made from corn, but it may be got from almost any sort of vegetable stuff. It may be obtained from cotton rags by mixing with the rags a small quantity of sulphuric acid. Ordinary blotting paper treated in the same way will yield glucose. Cotton rags and blotting paper are cellulose, and cellulose is the same thing chemically as sugar, save that it contains more water in each of its molecules. The sulphuric acid takes away the extra water, and the residue is glucose. Glucose is not quite so sweet as cane-sugar, but it costs only about one-fourth as much per pound. So it makes a very suitable adulterant, and for this purpose it is widely employed in the manufacture of candies, jellies, syrups, etc. It would be made out of rags but for the fact that corn is cheaper than rags. Ten pounds of glucose are turned out annually in this country for every man, woman and child in the United States—a total of 650,000,000 pounds. In fact, it is the most widely employed of all adulterants.

So glucose is more used than any other product by adulterators, and in order to sell it it must be past off under the name of something better, such as honey, syrup, jelly, etc., and thus defraud the public. We would advise the glucose trust to put their trust in some more honorable article. Glucose is too great a defiler of the pure and the good.

To Close Saturday Afternoons.—We wish that bee-keepers (especially those in or near Chicago) would hereby take notice that the offices of the American Bee Journal and Root's Chicago Branch of bee-keepers' supplies will be closed Saturday afternoons during July, August and Sept.

REV. CHAS. HORACK, of Lasalle Co., Ill., called on us June 10. Mr. Horack preaches to a Bohemian congregation, and keeps a few colonies of bees for recreation.

* * * * *

MR. W. T. RICHARDSON, of Ventura Co., Calif., president of the California Bee-Keepers' Exchange, wrote us June 5: "We shall not have any surplus honey this year."

* * * * *

MR. J. H. STOCK, of Erie Co., N. Y., has sent us a photograph of his apiary of about 20 colonies. We are glad to get pictures of the apiaries of our readers, some of which we are able to have engraved so as to reproduce them in the Bee Journal. But for engraving they must be very clear and distinct. Poor photographs cannot be "halftoned" very satisfactorily.

* * * * *

ALICE JENNINGS—evidently a little city girl—writing about bees, had this to say about them:

"Bees are always busy because the idle ones are killed. They make honey and wax, but paraffine candles are cheaper, or else candles made out of whales. The bees build cells and combs, and sometimes fill trees, and bears smell the honey and eat it. They suck the juice out of flowers, and the flower dies. Bees are meaner than mosquitoes, and you can tell them by the yellow bands on their abdomen."

* * * * *

MR. CHAUNCEY E. ANDERSON, of Lucas Co., Ohio, sends us a clipping from the Toledo Blade, about bees storing honey in a sponge that a certain New Englander put into a hive. The idea is to fill a hive with sponges, then have the bees fill them, and afterward squeeze out the honey, thus saving the comb-building. We can hardly conceive of anything more ridiculous or foolish. The whole thing has every appearance of the usual newspaper yarn.

Mr. Anderson reports the prospects good for a splendid honey-flow in his locality this year.

* * * * *

MR. FRANK BEERS, of the firm of E. A. Beers & Co., doing a general merchandise business in Uinta Co., Utah, called on us June 10, having come to Chicago about a week in advance of a carload of fine alfalfa extracted honey of last season's production. Mr. Beers' firm expects hereafter to represent the bee-keepers of his locality in the marketing of their honey. He has been instrumental in organizing a local bee-keepers' association numbering about 25 members. We wish both the firm of Beers & Co. and the bee-keepers all the success they may anticipate.

* * * * *

MR. W. E. HATTERMAN, a bee-keeper of this (Cook) county, returned from a visit to Porto Rico a few weeks ago. He is simply overwhelmed with the beauty of that new possession of Uncle Sam. He doesn't believe that there are two colonies of bees in modern hives on the whole island. All are wild, living in the trees, and whenever any honey is wanted, the natives must first go out and find a bee-tree! Mr. Hatterman thinks it would be a grand place for up-to-date bee-keeping. He traveled over a good portion of the island on horseback, and found in endless profusion nectar-yielding plants of many varieties. He was delighted with the climate, and says he is going back some day.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

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In the multitude of counsellors there is safety.—Prov. 11-14.

Eighty Colonies on 8 Frames, or 40 Colonies on 16 Frames—Which?

Query 93.—Which will give the apiarist the better results, 80 colonies on 8-frames, or 40 colonies on 16-frames in two stories, time, labor and expense being equally computed?—OHIO.

Eugene Secor—The former.

P. H. Elwood—80 colonies on 8 combs.

A. F. Brown—The 80 colonies, I believe.

Mrs. L. Harrison—I would take the 8-frame.

W. G. Larrabee—I should say 80 colonies on 8 frames.

Dr. C. C. Miller—That depends. Generally the 80 8-frames.

J. M. Hambaugh—Financially, 40 colonies on 16 frames, I believe.

Dr. J. P. H. Brown—It will depend on location and management.

Chas. Dadant & Son—8 frames are too few; 16 frames are too many.

Mrs. J. M. Null—80 on 8 frames will double 40 on 16, in my experience.

O. O. Poppleton—I do not practice tiering up of hives, and cannot answer.

G. M. Doolittle—For comb honey, the former; for extracted honey, the latter

S. T. Pettit—The question is too indefinite. Very much will depend upon the size and shape of the frame. If the Lang-

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stroth is meant, the 80 colonies will be away out of sight ahead; that is, all things else being equal.

E. Whitcomb—80 colonies in two-story 8-frame hives, every time, if the pasturage is ample.

D. W. Heise—I would prefer the 40 colonies on 16 frames, every time, the way I am situated in this locality.

Emerson T. Abbott—It would all depend upon the way they were manipulated, and the nature of the honey-flow.

E. France—40 colonies on 16 frames; or, better still, have 3 stories, or 24 frames. I have reference to extracted honey.

Prof. A. J. Cook—Can't be answered. Working for comb honey, the first; for extracted, we must have the two stories.

Mrs. A. J. Barber—For comb honey, I would want 80 colonies in 8-frame hives. For extracted honey, I would double them up.

J. A. Stone—The one is too small, and the other too large, but I would (just a guess) think the 80 colonies with the 8-frames.

R. L. Taylor—The 80, of course—twice as much if they are equally as good in April, and you give them room for surplus as they need it.

C. Davenport—There is no question but what better results could be secured with the larger number, for comb honey, in my locality.

J. E. Pond—This is a much mooted question, and a correct solution might depend upon locality. For myself I prefer the 10-frame hives, every time.

R. C. Aikin—Here, I believe the 40 colonies on 16, but I cannot understand what you mean by "equally." Suspect some fields would be different.

Dr. A. B. Mason—It will depend upon the locality and the apiarist. For myself and my locality, the better results will be with 80 colonies on 8 frames to each colony.

C. H. Dibbern—If you produce comb honey I should say the 80 8-frame hives, and for extracted the 40 16-frame hives, if the colonies were correspondingly strong.

Rev. M. Mahin—There are so many things that naturally enter into the case that the answer is very difficult. With a good season, and in a good field, working for comb honey, I would use the 80 colonies in single-story hives.

E. S. Lovesy—Why, the 80 colonies, every time. Have the frames straight, and keep all colonies strong, and there would be no comparison, as with proper management it would be impossible to produce the same results with 40 colonies as you can with 80.

Adrian Getaz—I suppose that the total number of bees is to be the same in both cases, and therefore each 16-frame colony has twice the number of bees that each 8-frame colony has. If such is the case, I should say unhesitatingly that the 16 frames will give the better results.

G. W. Demaree—There is too much difference in the influences of locality to answer this question so as to benefit many people. If I had 80 colonies, or 800 colonies, of bees in 8-frame hives, I would have to go to the expense and labor of transferring them to larger hives to suit my *locality*. Eighty colonies of bees in 8 frame hives in my locality would send the owner to the asylum every good honey season.

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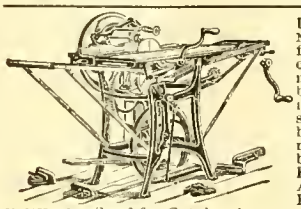

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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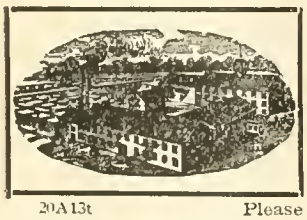

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Please Mention the Bee Journal when writing Advertisers.

GENERAL ITEMS

The Mysteries of White Clover.

Red clover was badly killed out in this region last winter, but white clover seemed to come out all right, making a fine show of promise. Favoring rains brought it forward in very thrifty condition, but still the question would thrust itself unpleasantly forward. Will the bees get any honey from it? May 26 the first blossom put in an appearance, and others followed in unusually rapid succession, so that in a very few days the pastures and roadsides were as white as they had ever been in the best years. But the bees didn't seem to be greatly interested, and by June 6 I was forced to the painful conclusion that there was "nothing in it" for the bees, as the combs were empty of honey and the bees were robbing wherever they had a chance.

Suddenly, and with no apparent reason for any change, on June 7 the bees began to tumble over one another in their haste to garner the precious sweet, and the present outlook is good for a crop.

If any one has a key to unlock the mysteries of white clover as to yielding or refusing to yield honey, I wish he'd lend it to me C. C. MILLER.

McHenry Co., Ill., June 9.

Good Prospect for Honey.

My bees came thru the winter all right, losing 2 colonies out of 40, others lost from half to all. I attribute my success to the "Old Reliable," and a good, well-ventilated cellar. Prospects are good for a large yield of honey. The worms that have destroyed the basswood the past three years have nearly disappeared. J. H. DOTY.

Polk Co., Wis., June 5.

Gathering White Clover Honey.

Our bees are in a perfect whirl gathering white clover honey. No swarms yet, but a fine start in surplus.

N. A. & M. M. ROBINSON.

Clark Co., Ill., June 5.

A Backward Spring.

We have had backward weather this spring. Bees got very little honey during fruit-bloom, on account of frosty nights. White clover has commenced blooming, and I see the bees are bringing in some honey now. Alfalfa will be in bloom in two weeks. The indications now are that we will have a good season for the bees remaining. The winter losses were quite heavy; some places very much so.

ELIAS JOHNSON.

Utica Co., Utah, June 2.

A Beginner's Experience.

I am only a beginner in the art of apiculture, but as far as I have had anything to do with bees, I have had a pretty good success. This is my fourth year, and I can say that we have had all the honey that we can eat. I started in with only one colony, and the first year I received a surplus of about 60 pounds of comb honey. The next year I started in with the same colony, as it did not swarm, and I received 123 pounds of comb honey. Last year I transferred some bees for a man for the half, and increast my colonies to nine. I received last year 264 pounds of comb honey.

My bees wintered well last winter, and came out without loss. I winter them in double-walled hives. There was some loss of bees in wintering in this locality, but not very severe. Most of the people who have bees here use the old out-of-date box. There are, however, some practical bee-keepers here, who are up-to date in their hives and

in their manipulations. There are about 1,000 colonies of bees in this county. About 8 out of 10 do not know how to take care of their bees. I was askt by two persons today, who have bees and want me to transfer them in a movable-frame hive, but I have no time to do it. It would be a good thing if they would take a good bee-paper.

Our honey season has opened, and my bees are working in the supers. The outlook at present is for a fair season of white clover, as it is now in full blast, and the bees are working strong. Last year it was a total failure. Our largest honey crop, however, is in the fall from Spanish-needle. The swarming-season is here also, and quite a number report that their bees have swarmed, but I have not had any swarms yet. I try to keep my bees from swarming, as I do not wish an increase in bees, but an increase in honey. Young swarms can be bought for from 50 cents to 75 cents. I keep my bees in town, for enjoyment, and to have something to eat on the table that is good three times a day. C. I. ELROD.

Clay Co., Ill., May 27.

Lost Heavily in Winter.

We are numbered among the many who lost quite heavily in bees, having lost 36 colonies out of 84, and up to date we have not had any swarms issue, but are looking for them every day. CRAWFORD BROS.

Oscoda Co., Mich., June 4.

Yellow Sweet Clover, Etc.

I have located several square rods of yellow sweet clover, and will try to get my place seeded to it. I will send a sample of the bloom. It commenced to bloom about May 10. Our bees are doing well, having wintered finely on the summer stands in single-walled hive. A. H COSHOW.

[Thank you for sending the sprig of yellow sweet clover bloom. We would like to get a quantity of the seed of this variety.—EDITOR.]

Yes, I Would!

It is perhaps best that I am not an autocrat for even an hour. If I were, there is one class of brutes that would never forget me, tho ever so busy keeping their feet from scorching.

I refer to those big, muscular people, full of wrath and ignorance, whose favorite method of punishing children is to viciously box their ears. Perhaps the offense committed is slight, but the child soon feels a violent shock on the side of the head, as if inflicted by a 10 pound ham! What injuries that brute has occasioned he may never know, but the poor, defenseless child may be made completely deaf the rest of his life, or even made a victim to epilepsy thru injury to the tender, formative brain.

DR. PEIRO.

Thinks the Prospects Fair.

Bees are doing very well now. Swarming is commencing in earnest. My first swarm came out May 25. White and Alsike clovers are commencing to bloom. Altogether, I think the prospects are fair.

IRA LUBBERS.

Sheboygan Co., Wis., June 7.

Bees All Right—Good Prospects.

My bees are all right. Out of 16 colonies I lost none, but some bee-keepers lost the most of theirs, and yet some of them know ten times as much as I do. Honey prospects are good now, but what we will get is another thing. CHARLES LEUNUS.

Kankakee Co., Ill., June 6.

A Bee-Killer.

I send you by this mail one of the bee-killers. Contrary to common opinion they are quite numerous in this section. I have killed a good many of them—as many as

300 Cases of Second-Hand 60-pound Cans

We have found another lot of 300 cases (two cans in a case) of second-hand 60-pound Cans. We offer them at 45 cents per case in lots of five, f.o.b. Chicago; or in lots of 10 cases or over, 40 cents per case.

Address, GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Bee-Supplies.

Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

Italian Queens.

4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

WALTER S. POUDER,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.

Please mention Bee Journal when writing.

Van Deusen Thin Foundation.

We have several 25-pound boxes of Van Deusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

THE A. I. ROOT CO.,
118 Michigan Street, - CHICAGO, ILL.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.
Please mention Bee Journal when writing

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ESTABLISH A HOME OF YOUR OWN

Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

Please mention Bee Journal when writing.

Listen! Take my Advice AND BUY YOUR Bee-Supplies of August Weiss!

FINE FOUNDATION AND TONS OF IT. WORKING Wax into Foundation for Cash or Trade a Specialty. I defy competition in Foundation. **Millions of Sections—Polisht on both Sides.**

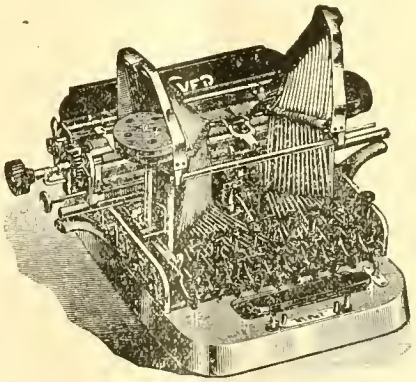
SATISFACTION GUARANTEED on a full line of Supplies. Send for a Catalog and be your own judge. **Wax Wanted** at 27 cents cash, or 28 cents in trade, delivered to me.

1Dtf AUGUST WEISS, Hortonville, Wis.

The Oliver Typewriter.

IT TOOK 25 YEARS to find out that typewriters have been built up-side-down. The OLIVER is built right-side up, where the WORK IS IN SIGHT.

THE OLIVER IS POPULAR because it is an up-to-date typewriter, not in the Trust, and because it SHOWS EVERY WORD AS YOU WRITE IT.



IN USE BY

HARPER BROS., New York.
McCLURE'S MAGAZINE, New York.
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MORGAN & WRIGHT, Chicago.
U. S. GOVERNMENT, Washington.
C., M. & St. P. R. R., Chicago.
CHAS. SCRIBNER'S SONS, New York.
COSMOPOLITAN, New York.
JOURNAL, New York.
TRIBUNE, Chicago.
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and countless other houses of like importance and character.

Send for Catalog.... Oliver Typewriter Company, N. E. Cor. Washington and Dearborn Sts. CHICAGO, ILL.

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Mr. Kipling Cured

By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT, Address, **DR. PEIRO,** Central Music Hall, Chicago.

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BEE-SUPPLIES.

Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor —in fact everything used by bee-keepers. Send for our Catalog.

C. H. W. WEBER,

2146 Central Ave., CINCINNATI, OHIO, Successor to CHAS F. MUTH & SON and A. MUTH.

Honey and Beeswax Wanted.

15Atf Please mention the Bee Journal.

CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

Please mention Bee Journal when writing.

YOUR WAGON WHEELS

may need new rings, new spokes or new tires. These repairs have to be made every little while with wooden wheels. Stop all this expense for all time by buying a set of our

ELECTRIC Steel Wheels

They are made with direct or staggered oval spokes, broad tires, any height, and to fit any wagon. They can't rot, go to spokes and need no tire setting—last indefinitely. There is only one thing better, and that is an

ELECTRIC HANDY WAGON.

Our free illustrated catalogue tells all about both and gives prices. Send for it.

ELECTRIC WHEEL CO. Box 10, Quincy, Ill.

Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

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BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

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PAGE

IT'S A CUTE TRICK—

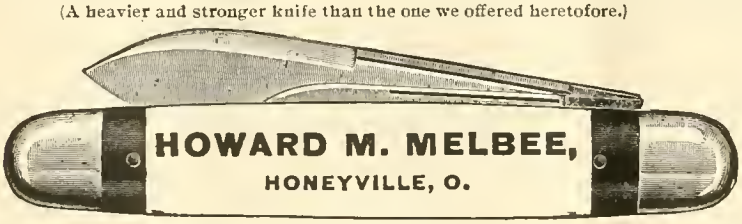
"stealing the pole," but the horse that takes the lead may not keep it. It's "staying qualities" that settle it. Notice where **The Page** trots.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

seven at a time. They look so much like bumble-bees that most folks don't know the difference. I have seen them with bees which they had caught, also horse-flies and bugs. They look and fly very much like the drone of the bumble-bee, but come in June instead of toward fall.

W. C. LYMAN.

Dupage Co., Ill., June 6.

[The sample bee-killer came all right. It does look very much like a bumble-bee.—EDITOR.]

Half the Bees Lost in Winter.

The bees that got thru the winter are doing finely here now. They will be swarming in a few days. White clover is commencing to bloom, and there will be a fine crop of it. Fully 50 percent of the bees here were killed in the cold-snap we had in February.

I cannot get along without the old American Bee Journal. W. L. SMITHEY.

Monroe Co., Mo., June 3.

Good Prospects for Honey.

The prospects are *good* for honey this year. White clover and motherwort are yielding honey very profusely at present; linden will bloom shortly. It was a tough winter on bees here. I lost about one-third of mine, and my neighbors nearly all they had. I sell my honey for 10, 12½ and 15 cents a pound; my neighbors sell theirs for 8 and 10 cents, and it is a slow go at that—chunk honey taken from the old-fashioned "gum." WILL J. EVANS.

Cannon Co., Tenn., June 5.

Wintered Out-Doors Without Loss.

My bees came thru the winter full and strong on the summer stands, without any loss. They brought me the last honey and pollen Nov. 23, 1898, and the first this year on April 10. The winter for bees was nearly one month longer than last. My first swarm came out May 23, only three days later than last year. I have had swarms every day since. After 60 years among the bees I have learned how to winter them on the summer stands without any loss. The method is easy and sure. There should be no loss of bees during the winter months. DAVID H. METCALF.

Calhoun Co., Mich., June 6.

[We should be pleased to give your wintering method a place in these columns, Mr. Metcalf.—EDITOR.]

Basswood Will be Late.

The prospect for a honey crop is good here. Clover is blooming now, and so far the bees have workt on it, tho it cannot be depended upon. Basswood is full of buds, but it will be late this year. It is a pity so many bees have died—I think more than half in this section. Some bee-keepers lost all they had. Surely, honey will bring a better price. GUSTAVE GROSS.

Vernon Co., Wis., June 11.

Heavy Loss of Bees in Winter.

I can't get along very well without the old American Bee Journal.

There was a heavy loss of bees in this locality last winter. I got thru the winter very well. My bees were on the summer stands, and I lost 7 colonies out of 80. My bees are in very good shape, and not swarming much. D. J. MCINTURF.

Harlan Co., Nebr., June 9.

Best Honey-Flow in Six Years.

We have not had such an unprecedented flow of honey since 1893. Ever since spring opened the flow has been almost continuous. I commenced keeping bees in 1863, and have been at it more or less ever since. I began in 1898 with 6 colonies, wintered 15

in good condition, and now have 22. A few swarms I doubled up, and put on two supers; all are full and capt over. I bought untested queens, and every one proved the finest. I have a model apiary in Simplicity and dovetailed hives.

A. S. GRIFFITH, M. D.

St. Clair Co., Ill., June 14.

Took His First Section Honey.

I took off my first section honey June 6, but can't determine the source gathered from unless it is locust.

The American Bee Journal has been a source of much pleasure to me, and brought me in ten times its cost. Thirty-two colonies at present constitute my apiary.

L. C. SALSBURY.

Bradford Co., Pa., June 8.

Convention Notice.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.

Hutto, Texas.

The Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—

PROF. A. J. COOK.

460 Pages—16th (1899) Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisht to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipt, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two NEW subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal with $2.00, and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

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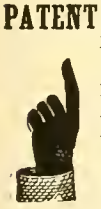
PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.



Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

Sprout Brook, Montgomery Co., N.Y.

Queens

Untested Italian, $1.00 each; after July 1, 70 cents each; 3 for $2.00. Tested, $1.25 each. Catalog free. Address

Theodore Bender, Canton, Ohio.

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BEE-BOOKS

SENT POSTPAID BY

George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 8.—Not any new comb on the market, and some of the amber and dark grades remain unsold. Extracted sells upon arrival—white at 7@8c; ambers, 6@7c, according to quality, flavor and package. Fancy white comb would bring 13c; off grades of white, 11@12c; ambers, 10@11c. Beeswax, 27c.

R. A. BURNETT & CO.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, May 31.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Supplies and demand are both light. Small quantities of new crop extracted, light amber, have been placed to the retail trade at 6¾@7c. Old honey is still on market.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

KANSAS CITY, May 15.—No. 1 white comb, 15c; fancy amber, 14c; No. 1 amber, 13½c; fancy dark, 13c; No. 1 dark, 12c. White extracted, 6c; amber, 5½c; dark, 4@4½c. Beeswax, 25c.

C. C. CLEMONS & CO.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & CO.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it.

PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.

M. H. HUNT.

WHEN YOU WANT ..QUEENS.. Send us your order. We will fill it by RETURN MAIL, with the best of Italians, large yellow Queens, healthy and prolific, workers gentle and the best of honey-gatherers. Tested Queens, $1.00 each; Untested, 75c; $8.00 per dozen. Send for our price-list, and see what others say.

J. W. K. SHAW & CO.,

LOREAUVILLE (Iberia Parish) LOUISIANA

22A6t Please mention the Bee Journal.

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

TERRAL BROS. Lampasas, Lamp. Co. Tex

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Please mention Bee Journal when writing Advertisers.

Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

Bee-Keepers' Supplies,

And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
JAMESTOWN, N. Y.

Please mention Bee Journal when writing.

We make the New
Champion Chaff-Hive
with fence and plain sections, and a full line of other
SUPPLIES.

A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

Please mention Bee Journal when writing.

BEES **QUEENS**
Smokers, Sections, Comb Foundat on
And all Apiarian Supplies cheap. Send for
FREE Catalogue. E. T. FLANAGAN, Belleville, Ill

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THE A. I. ROOT CO'S GOODS Wholesale. Retail.
Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
M. H. HUNT, BELL BRANCH, MICH.

Special Summer School of Shorthand

For the benefit of Teachers, Students, and others.
Six Weeks' Course for only $15.00—beginning Monday, July 10.
Send for Catalog.

Eclectic Shorthand College,
Headquarters of the Cross Eclectic System,
518 Ashland Block, CHICAGO.
39A1y Please mention the Bee Journal.

I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

G. M. DOOLITTLE,
11A26t Borodino, Onondaga Co., N. Y.
Please mention Bee Journal when writing

22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.
The following dealers handle our Foundation:

G. B. Lewis Co.....Watertown, Wis.	J. Nebel & Son .....High Hill, Mo.
E. Kretchmer.....Red Oak, Iowa.	G. W. Fassett.....Middlebury, Vt.
J. M. Jenkins.....Wetumpka, Ala.	J. W. Bittenbender.....Knoxville, Iowa.
Portland Seed Co.....Portland, Oregon.	J. L. Gray .....St. Cloud, Minn.
E. T. Abbott, ...St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co. .....Sheboygan, Wis.
Inter-State Mfg. Co.....Hudson, Wis.	Vickery Bros.....Evansville, Ind.
Reynolds Elevator Co.....Poughkeepsie, N. Y.	C. H. W. Weber.....Cincinnati, Ohio.

The L. A. Watkins Merchandise Co., Denver, Colo.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times.

CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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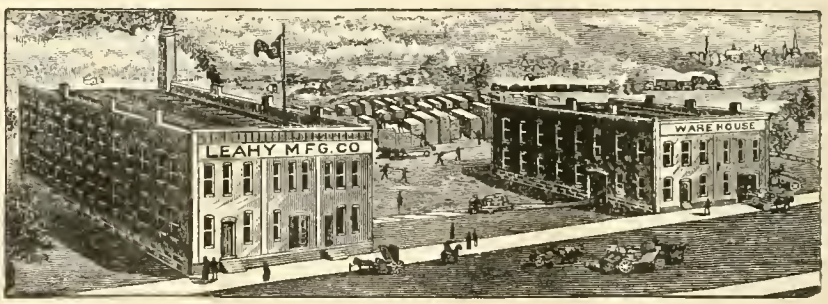

For Apiarian Supplies, address **LEAHY MFG. CO.,** Higginsville, Mo.
1730 S. 13th St., Omaha, Neb.
404 Broadway, E. St. Louis, Ill

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Mr. Eastern Bee-Keeper,

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AMERICAN BEE JOURNAL

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JUNE 29, 1899. No. 26.

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We really believe that if **ALL** the present readers of the American Bee Journal were so inclined, they could help to double its regular list of subscribers before August 1, 1899—or during the next 5 or 6 weeks. We do not find any fault with what our subscribers have done in the past toward increasing the list of Bee Journal readers—for they have done nobly—but why couldn't the doubling of the list be accomplisht within the next month? We surely think it could be done, and in order that it may be easier for those who help in it, we will make a **SPECIAL NEW SUBSCRIPTION OFFER**, and also pay all who will aid in securing new subscribers. Here is the offer:

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CONTRIBUTED ARTICLES

Home-Made Comb Foundation—How it is Done.

BY ADRIAN GETAZ.

LAST winter I found myself with about a hundred pounds of wax on hand, of rather inferior quality, that had accumulated little by little. I also needed some foundation for brood-chamber purposes.

Selling wax at some 18 or 20 cents a pound and buying foundation at twice or three times that price did not seem to me a very promising business. On the other hand, buying a $30 mill to save $20 on the foundation business wasn't very much better.

Under such circumstances I thought of the once famous plaster molds, and proceeded to make a set. The directions are as follows:

Make a frame of wood the size of the foundation wanted. Lay on a flat surface a sheet of foundation as a pattern, put the frame on it, and pour plaster paste in it. This makes one side of the mold. When the plaster is set, turn it over, put another frame on it (leaving the foundation), and pour in another batch of plaster, making thus the other side of the mold. Unite the two frames by a couple of hinges on one side, and you have a mold in the form of a book.

To use it, open the "book," wet both sides with warm water, pour melted wax on one side, and shut down the other side on it. In a half minute or so open the book and take off the sheet. Such are the directions given.

In the first place it is necessary to rub the plaster paste into the foundation sheet carefully, otherwise bubbles of air will remain in the cavities of the foundation and spoil the shape of the mold.

It is better to join the two frames by hinges before doing any casting, so as to insure exact correspondence of the two faces. Better use brass hinges and brass screws to avoid rust. Have the screws long enough to go deep in the plaster, so it will hold better. A few nails in the frame sticking inside and holding the plaster will also help the strength of the apparatus.

Thus armed I proceeded. The first trouble I got into was the impossibility of pulling, or rather peeling, out the sheets without tearing them up. This is due to the fact that I used for a pattern a Root sheet of foundation with deep walls. Some other make with little or no side walls should be used, if the melted-wax plan is to be followed.

I then tried the sheeted-wax plan, that is, making wax sheets and pressing them in the "book," or rather the mold. Simply shutting the book is not sufficient, so I put in the sheet, shut the "book," and put it in a press, and prest sufficiently to give the sheet a good impression.

In pressing a sheet, unless a very strong pressure is used, the wax will not be forced very deep in the depressions forming the wide-walls, so I had no trouble in taking out the sheet. But the trouble was, that the plaster is an entirely too weak material to stand any pressure at all. So I began to study about finding a substitute.

My experience in the building and contracting business enabled me to decide at once that the Portland cement was "the very thing wanted." The mold is to be made as with the plaster, only the "paste" must be thicker—about the consistency of the mortar used by brick-masons. After the first side is filled, wait a day before filling the other, as the Portland cement sets very slowly. There is, however, quite a difference between the different brands in that respect. Then fill the other side, keep the mold wet for about a week or ten days, and then open it. You will find that the wax adheres to the molds. Put the mold in a warm place, so as to soften the wax, and force it open, but be sure that the wax is not melted and absorbed by the cement. There may be some trouble in taking the wax out. The mold is now hard enough to use, but if kept wet, it will still harden slowly during several months, and eventually be as hard as the very best quality of stone, and practically indestructible. The cements of the Rosendale, Black Diamond, and similar brands set and harden much quicker than the Portlands, but their ultimate strength and hardness is much less.

The mold and press could be easily combined in one apparatus, and much easier to handle than the way I had them. I would, however, retain the "book" form for the mold, as it insures an exact correspondence of the two faces.

Making foundation by the press process requires sheets of uniform thickness. In the roll process the inequalities of thickness are "laminated out" by the rolling, but no such thing takes place in the press.

Dipping the boards endwise in the wax is unsatisfactory, as the wax runs down and hardens in streaks.

I use a dipping-board with a handle on one side. (See Fig. 1.) I simply lay it on the melted wax in a slightly rocking manner, so as to avoid having bubbles of air between the board and the wax, then take it out and turn over. (See Fig. 2.) This causes the melted wax to spread over the board uniformly, and insures a very regular sheet. As soon as the wax loses its transparency, I plunge the dipping-board and wax into a vat of warmer water, which causes the sheet to come off of itself, and with less danger of cracking than by cooling off in the comparatively cold air.

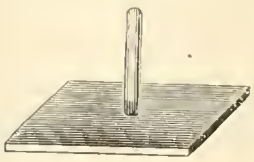


Fig. 1.

Fig. 2.

In cooling off, the wax-sheet shrinks, and unless it can, so to speak, glide on the dipping-board, it will crack. When I first began I noticed that the cracking was invariably in a certain place, and in a certain direction, showing clearly that it was due to a defect in the wood. It is necessary to have the dipping-board made of fine-grained, perfect wood kept as smooth as possible.

I have not yet tried any substitute for wood. Whatever material may be used should be porous, so as to retain water (otherwise the sheets would not come off), and be as smooth as possible so as to permit the contraction that takes place when the wax cools off.

The wax can be melted in a vessel, or rather a tank of tin; this to be placed in another of sheet iron containing water kept boiling all the time. I find that a little water in the vessel containing the wax helps to melt it more rapidly.

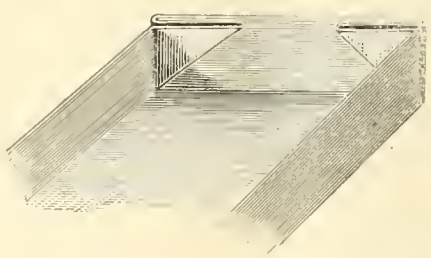


Fig. 3.

A tank or vat can be made of tin or sheet-iron without soldering or riveting, by folding the corners as shown in Fig. 3, but it would be difficult to describe the process.

SECTION SUPPORTS ON FENCE SEPARATORS.

Somebody spoke about nailing buttons (I suppose square pieces) of tin under the fence separators to support the sections in the supers, and dispense with T tins and other contrivances to support the sections. I wish to say that the ordinary tin is too weak, but the galvanized iron, 26 guage, used on buildings for gutters and cornices, would be strong and stiff enough for the purpose. Scraps of it can be procured at no cost at any tinner's shop where such work is done. There is some danger when nailing in small pieces of wood of splitting the piece into which the nails are driven. This can be prevented by clamping the pieces in a vise while the nailing is done. Knox Co., Tenn.

The Premiums offered on page 401 are well worth working for. Look at them.

The Nectar in Flower-Cups—Pure Italians.

BY A. NORTON.

I HARDLY think that any, or at most many, will attach much weight or importance to the idea that nectar in flower-cups varies in strength and quality according to layers in the same blossom, and that different lengths of tongue in different bees will make a resulting difference in the character of honey they might gather from the same flowers. This has nothing to do with the question of the ability of bees with longer tongues to gather honey from species of flowers where those with shorter tongues could not reach it. In this latter case the longer-tongued bees would gather *more* honey and *better*, providing the flowers in question produced a better kind.

But the other idea seems to me very far-fetcht, and without any disrespect toward any who have brought it forward, it seems to me hardly worthy of serious discussion. But I wish to look it over briefly.

In the first place, the nectar as secreted originally by the flower is a uniform product—it is already a sweetened liquid, not clear water and solid or thickened sweet. Hence it is exuded into the flower-cup as a homogeneous mass—all alike. In the second place, it is not composed of incompatible substances, as, for example, the cream and the water in milk, or as the lime and water in whitewash, or as paint in oil. On the contrary, the substances have the greatest affinity for each other (I do not mean chemical affinity, but molecular attraction or affinity).

Hence, the cream in milk is in a state of suspension; and, being lighter than water, rises to the top; while the lime in whitewash and the paint in oil are also merely suspended therein, but being heavier tend to settle to the bottom. But the sweet in nectar is in a state of solution, and is held everywhere disperst thru the water by molecular attraction. If you put solid sugar at the bottom of a glass of water and give it time enough, the sugar will gradually be dissolved and carried thruout the water; this will occur even if the sugar be tied up in a bladder or other porous membrane. And there will in time be no heavier or sweeter layer at the bottom, *unless the sugar be in excess of the saturation point, which is not the case in the thin nectar of flowers*. Hence the *tendency* of sweet in water is toward diffusion, and not toward accretion, until the saturation point is reacht. The same is true of salt and other soluble substances. Did any one ever hear it claimed that sap was sweeter in the bottom of the pail? Was it ever claimed that the honey was sweeter in the lower portions of the cells in the comb, or, if extracted, in the bottom of the can? This would be more likely on account of the greater proportion of sweet in solution than in the case of nectar.

Mineral springs are constantly depositing lime, silica, etc., in all conditions of the water, and wherever the water flows from them, for these substances are only in suspension. But the inland lakes of California and Nevada do not deposit salt, soda and borax until evaporated down to the saturation point; and, as the saturation points of these substances differ, they are not all deposited together, but in more or less defined layers, so that in dry lake-beds these deposits are reacht in regular succession by digging.

And, finally, if the sweet of nectar would settle (which it does not) the largest drop of honey produced by any flower would be too small for any difference to be noticed.

QUESTION FOR MR. DOOLITTLE ON PURE ITALIANS.

In closing I wish to ask a question of Mr. Doolittle, who I think is about right. (See page 306.) But if the Italian bee is not a pure race, and if this is shown by the increast amount of yellow that has been bred into some strains, then should not some pure stock exist with still more yellow than the yellowest bred Italians? All crosses are *between* the two pure types that produce them. Where is any race found of nearly pure yellow bees? And, especially, where are such near enough to Italy to have served the purpose of crossing with blacks to produce the common Italian bee?

Monterey Co., Calif.

Making Increase by Dividing—Feeding Bees.

BY C. P. DADANT.

IN a previous article I stated that it was our method to take the increase in bees, when any is wanted, from colonies that are not expected to store much surplus. Our reason for doing this is that we have always noticed—and all who have had extensive experience in the apiary will sustain us in this—that it is the strongest and best colonies from which the real honey crop may be expected. If such colonies may be induced to work freely in the surplus instead of swarming, and we succeed in this by our methods in most cases, these colonies may be depended upon for a crop far in excess of what the colonies under average would yield. The prolificness of the queen may not be the sole cause of the difference. We believe that the greatest cause of the difference in yield is the earliness or lateness of the breeding; the early colonies having the bulk of their bees ready for the harvest, while the late ones have them ready too late, as mentioned by me in a previous article.

But aside from these causes, it is probable also that there is a difference between colonies in the activity of their bees as there is in men, some being more industrious or better managers than others. For this reason, altho we want the increase from the late and comparatively inferior colonies, we must not get our breed from them, for it is also of the utmost importance that our queens should be of the very best quality, that is, bred from the most prolific mothers, and of a race of active workers. In a word, we must do with our bees, as much as in our power, what we do with our horses, our cows, our chickens, and our pigs—breed from the best, the gentlest, the most serviceable all around.

To do this and yet keep our best colonies at work producing honey, all that is necessary is to rear our queens from select colonies, taking from them, or rather exchanging from them, as much brood as is necessary for our purpose.

It is not in the scope of this article to give instructions on the rearing of queens or on the making of nuclei, suffice it to say that we must rear, in nuclei or otherwise, as many young queens as our swarms will need. These queens may be introduced while yet in the cell to the divided colonies.

When we say that we take our increase from inferior colonies, we do not wish it understood that we take it from weak colonies. A colony which has not filled most of its combs with brood by the middle of June, is not to be expected to furnish any increase. What we mean to say is, that when the harvest has begun fairly, we take the increase from those colonies which, altho apparently strong, do not work in the supers. The weak colonies would better be let alone, and if their queens are at fault, perhaps they would better be replaced, and it is quite likely that some of our young artificial swarms will soon prove superior to such colonies.

We proceed as follows: Selecting the colony which is to furnish us the larvæ for our young queens, we exchange a number of its brood-combs, those containing young brood, for the same number of brood-combs of an inferior colony, without the bees, taking care to leave in the latter hive only such brood as has been furnisht by the selected colony, for if we left them any of their own brood, they might rear queens from this perhaps in preference to the other. As a matter of course, the queen of this hive is removed, either to be killed or given to a queenless colony, or exchanged for a still poorer queen in another hive.

The now queenless colony goes to building queen-cells from this selected brood. On the ninth day after the operation we are ready to make as many swarms as there are queen-cells but one, since one is needed for the colony that reared them.

We now go to our colonies from which we desire the increase, find the queen of each and remove her to a new stand with half of the brood-combs, more or less, according to circumstances, and a goodly number of young bees, enough at least to keep the brood warm. It must be remembered that as this colony, or rather this swarm, gets none of the old bees, it needs a rather larger number of young bees than would appear necessary in order to take care of the brood.

On the tenth day, or the day following this operation, we give each of our queenless divisions a queen-cell, grafted on the combs in the usual way. These hives should as much as possible be supplied with empty comb, or full sheets of foundation, as their bees will build nothing but drone-comb until the young queen is laying, which will require from 6 to 15 days. This is important to remember. On the other hand, the hive containing the queen may be depended upon to build mainly worker-comb in its empty frames, as their numbers are diminisht, and there is but little inducement to the building of drone-comb in any other than a queenless or a wealthy colony. The queenless colony builds drone-comb because there is an instinctive feeling that drones are needed to fertilize the young queen when hatcht, and the wealthy colony builds drone-comb be-

cause it is more spacious, and requires less labor for the same amount of honey than worker-comb.

Should the colonies from which the increase is taken prove rather too weak to follow exactly the above methods, one swarm may be made from two colonies, by taking the queen and only one or two combs of brood from one hive and placing the swarm thus made on the stand of another colony which is removed to a new position. We have used the same colony three times over to furnish bees to new swarms, by removing it at intervals of 10 to 20 days, and placing a new swarm on its stand.

By following the methods above given, varying the proportions of bees or brood taken with each swarm to suit the circumstances, one may secure quite an increase from colonies that would have yielded but little, and at the same time one retains the best colonies for honey-production. We have always found this method the most profitable, and much prefer an artificial swarm, carefully made and properly managed, to the swarms secured by natural swarming.

As a matter of course, if your best colonies swarm in spite of your endeavors to prevent them and to keep them at work, you will have good swarms, but it will be at the expense of the honey harvest.

WILL IT PAY TO FEED THE BEES?

I have received the following questions, which I will answer here:

I have 27 colonies in good hives, which wintered well, and I have had 10 big young swarms already. But the bees have no honey in their hives—I don't think they have a pound. They are beginning to kill the drones, which shows that they don't get honey enough to feed the brood. Will it pay to feed them? I have fed $10 worth of sugar already. We have very little white clover, but the basswood is full of buds, and it will be about three weeks until it begins to bloom; but the ground is full of young white clover all over. Will this young clover that came up from the seed this spring yield a crop of honey next fall, or will it not produce until next year? We have had a very wet spring. T. L.

ANSWER.—The experience of Mr. L. has been ours many times. We have seen a number of seasons when the crop failed till the month of June was far advanced, but we have always fed whenever it was needed, and have always been repaid for the trouble and expense. We will confess that in a number of instances we came too late, and even lost colonies in out-apiaries from sheer starvation, when the fields and meadows were white with bloom. Our experience is that the very best seasons often commence in this way, for the excess of rain is more detrimental than any other cause to the immediate production of honey. But the excess of rain also produces an excess of vegetation, and sooner or later in the season a lull in the rainfall gives the flowers a chance and the honey flows abundantly.

There are drawbacks in all lines of business, in all branches of farming, and ours is not exempt. It is the man who perseveres, who "stays with it," that wins the laurels. The wet season will produce an amount of bloom which could not be expected in a dry one, and just as soon as circumstances are right the harvest will begin. In the season of 1875—24 years ago—we experienced such a season as the present one. We fed all thru the months of June and July, and still the rain poured. In August colonies deserted their hives, and I saw a sight that I have not seen since—a swarm hanging to a limb and the bees dropping from the cluster to the ground from inanition. But the flood came to an end in September, and in the first two weeks of that month we harvested more than ten times the amount expended during the season.

In regard to the question as to the young white clover, I cannot make a favorable answer. I have never seen much honey harvested from young clover, even if it bloomed the first year of its growth. It is only during the second year that much may be expected from it. We have great hopes here yet of a clover harvest for this year, altho we have had too much rain. There is an abundance of bloom, and if the weather gets favorable we will surely harvest enough to pay us all for our trouble. Hancock Co., Ill.

Dead Bees on the Hive Bottom-Boards.

BY G. M. DOOLITTLE.

GOING past a would-be bee-keeper a few days ago, I was called in to see why some of his colonies did not work as strongly as others in the yard. After looking at the entrances of the hives for a moment, noting that some were working strongly while others were doing but little, I askt if the hives had been opened to see what was the trouble.

"No," was the reply I received. I knew this man kept sheep, and so I said, "How are your sheep getting on this spring"?

"Oh, first rate," was the reply.

"How do you know the sheep are doing well"? I askt.

"Why, how does any one know anything? I have foddered the sheep three times a day all the winter and spring, and been with them lots beside, even getting up many times cold nights to look after the newly-born lambs that they need not become chilled and die. And being thus familiar with them, why should I not know when they are prospering"?

"Very well," I said. "How many times have you 'foddered' the bees this spring"?

"Not a once," was the reply. "Didn't suppose they needed foddering."

"Have you been up any during cold nights to see that the newly-born bees did not chill, or paid any attention to the hives to see that the bees were made as comfortable as possible, either night or day"?

"No, I had to look after the sheep so much that I had no time left; nor did I suppose that bees needed caring for like sheep; and I am sure that it would not pay me to spend time on them as I do on the sheep."

"How many sheep had you last year"?

"About 60."

"How much did you receive from them for all your work, 'foddering' feed, etc., expended on them during 1898"?

According to my book, not far from $325."

"A pretty good showing, but when I tell you that last year from 30 colonies of bees at my out-apiary I sold comb honey to the amount of $348.28 you will see that the proper amount of time spent on the bees pays fully double per colony that you get from a sheep, with only a tithe of the work you spent, and that also without any cost for 'fodder.' But let's look into this colony of bees which do not seem to be flying much."

I had noticed that where the bees were flying the strongest there was quite a number of dead bees out on the ground about the entrance to the hives, but with those not flying as strong there were less dead bees, and what there were showed by their old looks that they had been hauled out during the winter. I had also noted that his hives had loose bottom-boards, from some empty ones which were piled up, so stepping to the hive designated I laid a bottom-board down beside it and lifted it over from its own stand to the one I had put down. By thus doing I exposed almost a sickening sight from the dead bees that were under the hive, all moldy in places, and in others all wet and fairly rotten, with worms crawling and working amongst the rotting bees, while the stench was horrid when this putrefying mass was disturbed.

Looking up at the man, I said, "How do you suppose that your sheep and lambs would thrive if you neglected them as shamefully as you have these bees"?

"Not much, I guess," he said, his face showing shame and confusion.

I now set the hive back again, keeping under it the dry, clean bottom-board I had set it on, and proceeded to open the hive. There was brood in three combs to the amount of about one frame full, with only about bees enough to well cover the brood, which showed that the little colony was doing its level best under such adverse circumstances, for between many of the combs either side of where the brood was, the dead bees came well up between the combs. I lookt at two other hives, finding them in somewhat similar shape, tho none quite so bad as the first, fixing those lookt at in good shape by seeing that they had at least 10 pounds of honey, the combs free from dead bees, where such were matted together, and the top of the hive made snug and warm, telling him to go thru the rest in a similar way.

When I continued on my way, I askt myself, "Is it any wonder that so many tell us that bee-keeping does not pay"? I have often wondered that the idea has so fully obtained with nine out of ten of those who start in bee-keeping, that all they have to do is to get some bees, by finding a swarm or buying a few colonies, and provide a place for them to stand, after which a profit will accrue to them by hiving swarms and putting on and taking off sections. And when profit does not accrue, and their bees die from *neglect*, we are sure to be told, "*Bees* do not *pay*." Yet these very persons will work faithfully, year in and year out, caring for, feeding, grooming, etc., their hogs, sheep, cows and horses, when a much less amount of labor, wisely directed, spent on the bees, would yield a greater profit.

And the most wise of all wisely-directed labor, which can be spent on the bees, is to see that the dead bees are removed from the bottom-boards of the hives in the early spring of the year. With movable bottom-boards this is very easily done by putting a clean bottom-board on the stand and setting the hive on it, after which the dead bees are swept off from the one which was under the hive all winter, the board being cleansed with water if needed, when it is ready to be put on the stand of the next to set that hive on. And where the bottom-board is not only movable, but reversible, the work is still more simplified, for in turning the deep side down, which was up during the winter, the dead bees mainly fall off, and what adhere can do no harm, as they are under out of the way, and will fall off themselves before you wish to use the deep side again for the next winter. But with hives having the bottom-boards nailed fast, the work is greater, but even then it should *never* be neglected. A clean hive should be placed on the stand, and the frames from the hive in which the bees have wintered be set over into this clean hive, when the now vacated hive should be thoroly cleaned of all dead bees, dirt and filth, when it is ready for the next colony, and so on thruout the apiary.

In all the work done in the apiary, I doubt whether there is any that pays as well as the removing of the dead bees from the bottoms of the hive, for bees can prosper little better with a lot of their dead companions underneath their brood-nest than could we with several corpses in the cellar under our dwellings.—Progressive Bee-Keeper.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

How Often to Examine Hives.

I would like to know how often bee-keepers examine their hives. Mine get fast in spite of me. VA.

ANSWER.—Some say they don't examine them more than once in a year or two, but probably they are quite exceptional. Others examine them two or three times in a season, and many once a week. If you mean that the frames are stuck fast with propolis when you say "mine get fast in spite of me," you will probably find that you will always have trouble with propolis. But the trouble will be much less if you have such frames and rabbets that the point of contact will be very small. The trouble will also be less with even the worst kind of frames if you carefully scrape out all bee-glue once a year.

Swarms Deserting the Hive—Combs Wrapt in Tarred Paper.

1. Is there anything to be done to keep a swarm of bees in the hive? I hived my new swarms last year in 10-frame hives without foundation, but most of them went away, after staying about an hour. This year I hived them in the same kind of hives with foundation, but I had the foundation wrapt in tar paper for a couple of weeks before I put it into the hives, in order to keep foul brood out, but my bees didn't stay; some of them did not want to go into the hives.

2. Had the smell of tar any effect on the bees, or do they hate it, and will it keep foul brood out of a colony? My bees are all diseased with foul brood, and almost everybody else's bees have the same trouble. MRS. S. S.

ANSWERS.—1. In probably the great majority of cases a swarm deserts a hive because it is too close and hot. If the hive is clean, and if it is in a cool, shady place, with plenty of ventilation, the swarm is likely to remain. If the hive must remain in a hot place, it may be a good plan for a day or two to keep it sprinkled with water during the hottest part of the day. Be sure to have the hive well ventilated by raising up, and for a day or two it may be well to have the cover slightly open or raised, so the air can circulate freely thru.

2. Unless the smell of tar is very strong I hardly think the bees will mind it, but I may be mistaken. I have read of Australian bee-keepers wrapping foundation in tarred paper before giving it to swarms, and it was claimed that it prevented foul brood, but I don't know whether it has been tried in this country.

Likely Afflicted with Paralysis.

I have a colony of bees in which there are a number of small, black, glistening bees, and other bees seem to be trying to kill them off. The colony is in a prosperous condition, but I can't understand where the black bees come from. PENN.

ANSWER.—Very likely they are afflicted with paralysis, and as far north as Pennsylvania you need pay no attention to it, for the disease will probably disappear after a little while of itself. So far there seems to be no reliable remedy for it.

Keeping Roaches, Ants, Etc., Out of Hives.

I want to find out how to keep bugs out of hives, such as roaches, ants, mice, bee-lice, etc. N. MEX.

ANSWER.—The best way to keep roaches, ants and mice out of hives is to have no retreat in the hive to shelter them. Have your hive so arranged that bees can get to any part of it, and the bees will keep out the intruders. An ant or a roach can get thru a crack that will not allow a bee to pass, and in hives that have a quilt over the frames they have a safe place for a nest into which the bee cannot come, that is, between the quilt and the hive-cover. But if you use a plain board cover, there is no such retreat. The bee-louse (braula cœca) is troublesome in other lands, but I never heard of it being troublesome in this country.

A Quartet of Questions.

1. I want some colonies to build all the comb they can from frames with foundation, and I don't care for surplus from those colonies. Which way would you advise for best results?

2. Will bees cross a bay (1½ miles across) as readily as if it was land?

3. At what age is a queen most prolific?

4. How many Hoffman frames should a *good* queen have filled with brood by this time? I mean everything favorable for her laying to her full capacity. My best queen has 17 frames well filled in three stories. WASH.

ANSWERS.—1. I don't know. Perhaps something like this: Get the colony strong, filling as many frames as possible in two stories. Take out about half the combs with brood, giving frames of foundation in place of the brood taken away, and putting the foundation in the central part. Put the brood taken away in an upper story, with excluder between it and the two lower stories. Repeat the process every week or so, always taking away the oldest brood present.

2. I think not. But once having found their way across, they would go across the water that distance for stores as readily as if it was dry land.

3. Probably in her second year.

4. I should say she was doing good work if she filled 12 or 14. Your queen must be a fine layer.

Bees Affected with Foul Brood—Extracting.

1. I have kept bees over three years, and this spring I was especially interested in them. I have spent lots of money for them by buying supplies, bee-books and bee-papers. I was with the bees every day from five to six times, from about the beginning of April. I have 15 colonies—ten in 10-frame hives, and five in 8-frame hives. Eight colonies in the 10-frame hives are pure Italians, and the other two colonies in the other two 10-frame hives are pure blacks: the 5 colonies in the 8-frame hives are hybrids. Every colony came thru the winter very nicely, and built up fast. The beginning of May they started to work in

the supers, and May 14 the first swarm issued, and up to June 6 I had the sixth swarm.

Just a few days ago one of the black colonies was stopping work in the supers, so I thought I would see what was the cause. As I opened the hive I found that almost every comb had more or less foul brood in it, and as I opened all the other hives the same day, I found about half of the colonies had some foul brood, but only on two or three combs. (It may be that it has spread all thru the colonies now.) I really can't tell how sorry I am. I can almost say I love my bees, but when I found foul brood in some of the hives I almost felt like crying. I have neither opened nor handled any of the diseased colonies since, for fear some of their bees might give the disease to the other colonies. I don't like to destroy the diseased colonies—if possible I would like to save them. How can I get rid of the disease without destroying any of the colonies, at least those which are not affected so badly? I have heard of spraying the combs. What do they spray with, and what kind of tool is used?

2. I expect to buy an extractor; what kind would you advise me to get? I mean to increase my colonies to about 80. I have some two-story hives for extracting, and in the fall I mean to extract from the brood-chamber, so I will always keep nothing else but Langstroth size frames.

NEW YORK.

ANSWERS.—1. A good deal has been said one time and another about using naphtol beta or some other drug to cure foul brood, but hardly any one in this country nowadays thinks it advisable to trust to anything of the kind. It does seem hard to destroy nice combs, but it may be the cheapest thing in the long run.

2. A 2-frame extractor, such as the Cowan, would probably answer your purpose nicely.

Young Queen Swarming the First Year.

If a young queen is given to a nucleus in April, before swarming, will she swarm the first year?

SUBSCRIBER.

ANSWER.—Quite likely she will if the colony becomes strong, and room is limited, but she is not so likely to swarm as an older queen.

Colony Suffering from Laying Workers.

I have a colony of bees that has laying workers. Will it do any good to buy a queen and give to them? I gave them a frame of eggs and brood last week, and find that they started several queen-cells, but in each one there are four or five eggs to-day, so I think it is a waste of time to give them any more—only on your advice will I do so.

CITYMAN.

ANSWER.—It probably won't pay to fuss with them, for in most cases the best thing is to break up such a colony and give their frames to other colonies. If you had a queen-cell just ready to hatch, or, better still, a young queen that was just hatcht, it might pay to give to them. If you unite them with another colony or colonies, you can afterward draw brood and bees from those colonies and start a nucleus that will be ahead of what you would have had from this colony of laying workers.

Bees Affected—Perhaps Not Foul Brood.

About 30 days ago I was forming new colonies by cutting out queen-cells from natural swarms, grafting in frames of brood, placing in new hives, and shaking off some young bees from other hives, or changing places with other hives, etc. I found one colony with brood badly scattered, with sunken caps, with nearly all the sealed brood dead, but I had shaken off two frames of brood before I noticed the condition of the brood. I had given the new colony a capt cell already. I promptly closed both hives, went to my library and read up all I could find on foul brood. (I have Langstroth and A B C), and after reading all in them on the subject, I lookt over all back numbers of the Bee Journal that had anything on foul brood, and from all the information I could get I was not satisfied whether this was really foul brood or not. I then ordered Dr. Howard's book on foul brood, and after reading this book carefully I came to the conclusion that my case was the same trouble as the one Dr. Howard describes on pages 12 and 13 in his book, and not foul brood. But the queen that hatcht from the cell given to the above-mentioned colony was lost in mating, and I gave this colony a frame of unsealed brood to rear a queen. I examined this colony this morning, and I found dead brood. I cut in one of the queen-cells and found a sick larva. The cells are all capt now, and I find another colony (next door neighbor) has dead brood. I burned the old colony, hive and contents on the same day, or rather night, that I made the discovery of dead brood. Now, the looks of the combs were just like the cut in Langstroth's book, page 448—all, or nearly all, brood dead that is sealed, but none seems to be affected that is not sealed. The dead brood has no bad smell, and is not ropy, and none so far that I have found settles down in the lower side of the cell, but is still in perfect shape. The unsealed brood, so far as I can tell, is perfectly healthy. Do you think this is foul brood? I will be glad to furnish some samples for a microscopist. How shall I prepare it for the mail?

GEORGIA.

ANSWER.—According to your description it hardly seems like foul brood, but it would be the part of wisdom to consult some one better informed as to foul brood, say Dr. Wm. R. Howard, Fort Worth, Tex., or Wm. McEvoy, Woodburn, Ontario, Canada. A good way to send the brood by mail is to send it in a tin box such as is used for seidlitz powders, or a plain square tin box with cover that any tinner would make for you. Of course paper would be wrapt around the tin box.

Hive with Jumbled-Up Combs.

I bought a colony of bees the hive of which had not been opened for three years. I got it home and opened it, and found all the frames (8 Langstroth) one solid mass. I cut one out, but the comb fell to pieces. I then closed the hive up. As I wish to get a swarm or two from the colony by dividing or otherwise, will you please tell me what is the best thing to do? N. B.

ANSWER.—If I understand you correctly, the frames are so filled with combs built crosswise that they cannot be taken out. The best thing is to let them swarm naturally, and there is not much trouble but what a good colony in an 8-frame hive will do so. If you think there is any danger they will not swarm, you might make the matter a little more sure by refraining to give them surplus room. It may not be a bad plan to continue a colony in the same hive, depending on a swarm from them each year, and depending on the swarm for surplus, putting the swarm on the stand of the old colony, and putting the old colony close beside the swarm, then a week later moving the old colony to a new stand. That will make the swarm strong for surplus honey, and it will weaken the old colony so it will not swarm the second time. But if you care more for increase than for honey, then put the swarm on a new stand, leaving the old hive on its own stand.

Several Questions—Locust vs. Basswood, Etc.

I find at this time, after hiving a large prime swarm, the first thing they seem to be doing is to build a queen-cell or cells. I use 8-frame dovetailed hives, with 7 frames of straight comb which I have on hand, and one of these 7 I give them, with only a small piece of comb, or a small piece of foundation, so as to give them a place to build or deposit wax, as I believe it must be their characteristic to build some new comb. Now, is it natural for them to build queen-cells? They are laying eggs in regular form.

2. I have clipt one queen's wings, and intend to destroy her when she goes out to lead a swarm, and eight days from then destroy all queen-cells but one, to prevent further swarming. What do you think of the value of this?

3. I have one hive which is now hatching a large supply of drones. How is it best, if best, to destroy these?

4. How do you estimate the value of locust as compared with basswood for honey? I ask the last question as locust grows much more plentiful here than basswood.

I might add that where I found queen-cells started in these prime swarms I failed to find queens, as I lookt for them, but possibly I overlookt them, as they were very large swarms, and the queens very shy, owing to their being cast by the black bees. POLAND.

ANSWERS.—1. I think it is much more common than is generally supposed for a swarm to build queen-cells. Sometimes they are built right after swarming, and sometimes later. The greater part of superseding is probably done

after swarming, and it must be remembered that in the natural order of things every laying queen is superseded.

2. It will work all right if you don't miss any cells.

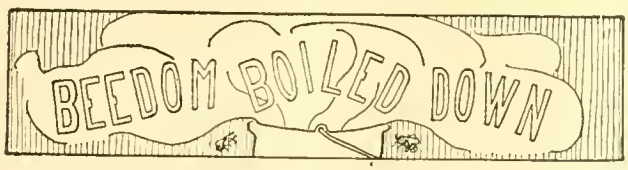
3. Kill them dead before ever they get alive. Shave off their heads in the brood form, or, better still, cut out the drone-comb and put patches of worker-comb in its place.

4. I think basswood is valued as a honey-tree much more than locust. Possibly if locust came as late as basswood the case would be different. Locust is valuable for building up, even if not a drop of surplus is ever gotten from it.

Colony Troubled with Wax-Worms.

I have a colony of bees in a box-hive, and yesterday as I was going thru my bee-yard I found quite a number of young bees on the ground in front of the hive, and on the bottom-board; some of them were dead, and others were alive; I noticed the bees dragging them out. From what I can get out of the American Bee Journal I think it is the wax-worms that are making trouble with them. What is the best thing for me to do? Mo.

ANSWER.—If the trouble is from worms, you may do some good by digging the worms out of their silken galleries that they have spun. Take out a frame of brood, and you will see the galleries of the worm running along the surface of the comb. Take a wire-nail, dig out one end of the gallery, then the other, and then tear it entirely out, and you will dislodge the worm. Some say that if you hammer on the frame with something hard, like a knife-handle, the worms will crawl out and drop to the ground. I haven't had worms enough in my combs to try it. Neither will you need pay any attention to worms if you have strong colonies, especially if they are Italian. Even a weak colony of Italians will keep the worms at bay without any help on your part.



Horses Near Bees.—F. L. Thompson reports in the Progressive Bee-Keeper that V. Divinny, when working horses near bees, makes a smudge to the windward, of any convenient material, especially dry horse-manure, that will make abundance of smoke. Result, safety.

The Amount of Wax from Old Brood-Combs is a thing often inquired about. F. A. Gemmill says in the Bee-Keepers' Review that his average yield of wax from a set of eight Langstroth combs is three pounds. As he uses a press of excellent power, the probability is that this is a high average; but it is well to have something as a standard.

Honey-Dew for Winter Stores.—After experiencing a loss of 25 percent of his colonies in wintering, D. W. Heise says in Canadian Bee Journal: "My first experience of leaving honey-dew in the hives for winter stores has taught me an object lesson, and I now promise *never* to do it again." Mr. Heise, don't be rash; sometimes it is easier to make a promise than to keep it.

Empty Combs Above or Under the Brood-Nest.—When an 8-frame hive becomes crowded with brood, Dr. Miller puts a story of empty combs under, so that the queen may extend the brood-nest downward. If the empty combs are put above, it cools off too much the brood-nest. But Delos Wood says in Gleanings in Bee-Culture that he gives the empty combs above, because when the *upper* story is filled with brood and honey his bees are likely to swarm, no matter how much empty room below. In California there may not be the same danger from cool weather as in northern Illinois.

For Cure of Foul Brood, Henry W. Brice says in the British Bee Journal:

"No doubt disinfectants are most useful in modifying the virulence of the disease under certain conditions, but the conclusion I am forced to is that this modifying power takes place so long as the energy of the agent exists, and on its exhaustion matters are not improved; they have been simply held in abeyance, unless a state of immunity supervenes. To summarize the treatment, my advice, tho containing little that is new, is: (a) get bees off combs and destroy the latter at once by fire; (b) keep bees confined for 24 hours (this will kill many of the badly diseased ones), rehive them in a clean hive on starters only; (c) re-queen or give hatching queen-cell in 48 hours, *i. e.*, before any eggs are hatcht out that may have been laid; (d) feed daily with medicated syrup for two months at least; (e) paint old hives and supers used in connection with diseased bees as above mentioned; and (f) consign to the flames without delay all quilts, combs, frames, etc., removed from diseased colonies, and do not leave infected matter about an apiary within reach of bees."

Marketing Honey.—Some branches of production in this State have become so thoroly organized that they practically control the markets in their particular lines. Similar results should obtain among the producers of honey. As it is, a few local jobbers by concerted action are able to bear the markets on this coast, and having obtained control of the most of the output, proceed to bull the markets in the Eastern States. The result is that an article which brings the producer from 6 to 7 cents, after having the profits of the middleman and the tariffs of the transportation companies added, costs the consumer anywhere from 15 to 25 cents. The producer and consumer must be brought closer together.—H. M. Peters, in Pacific Rural Press.

The New York Honey Market.—Years ago J. E. Crane sold most of his honey in the New York market, as he relates in Gleanings in Bee-Culture, and at that time much of the honey was in 4-pound boxes, but some in 2-pound single-combs glast. On visiting the same market last winter he didn't see a 4-pound box, and scarcely a 2-pound section. The dealers said square sections had had their day, the demand being for tall sections. A section 4x5 is preferred to one 3⅞x5. No importance is attacht to the matter of having the row of cells next to the wood sealed. The general preference is for glast sections. A case holding 25 to 30 sections is preferred to a smaller one. In some cases sections are sold by the piece. Honey in plain sections was scarcely to be found, having been pickt up by retail dealers.

Artificial Increase.—W. W. Somerford tells in Gleanings in Bee-Culture how he has increast from 7 to 50 colonies. The 7 colonies were in 2-story 10-frame dovetailed hives, with about 10 frames of brood each, some of it in the upper stories, each colony having plenty of honey. The queens were removed from the 7 colonies 11 days before dividing. One of the 7 colonies had hatching queens, and from this colony "pulled queens" were taken for some of the nuclei, the others receiving two to six queen-cells each. Each nucleus had two to four combs well covered with bees, and the entrances were closed with moss, grass, or green leaves, so that the bees could gnaw their way out in the course of two or three days. The seven nuclei, however, which occupied the parent locations, did not have their entrances closed, and to these no brood was given, only a bunch of queen-cells. When the queens were removed from the parent colonies, the best of them were taken for use in another apiary, the rest were killed.

Production of Comb and Extracted Honey.—Here is the plan of H. H. Hyde for producing both, as given in the Progressive Bee-Keeper: Say an apiary of 50 colonies in 8-frame hives, nearly all two stories, having been left thus from the previous year. Give the queen the run of both stories, push breeding, feeding if necessary. When the fast flow comes, take away one story, and fill the remaining story as much as possible with sealed brood, putting the youngest brood at the outside. Put on sections filled with foundation, also as many bait sections as are on hand. Storing will continue above, and the hatching bees will allow the queen plenty of room below, so swarming will be limited. As the flow gives away, the section-supers are gradually replaced by extracting-supers, ready for the long, slow flow. At the time the brood-combs (without bees) were taken from the 30 colonies, they were tiered up on the remaining 20 colonies, and these were kept for extracting. The cotton-bloom, beginning July 15, is extracted, and the inferior broomweed honey is left for winter and spring.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,

15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JUNE 29, 1899. NO. 26.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Advance in Prices all along the line seems to be the order of the day, and with the advance of lumber and nails bee-keepers' supplies are likely to have a rise. So reports Gleanings in Bee-Culture. Well, that's all right, providing the price of honey keeps proper step with the advance of other things. But will it?

Salt to Kill Grass.—Editor Hutchinson, in the June Bee-Keepers' Review, says that salt sprinkled around a hive will kill the grass that is near it. It is better to thus kill the grass for two or three inches around the hive than to attempt to keep it cut. The lawn-mower cannot get near enough to cut all the grass that grows close to the hive; and to keep it pulled, or sheared off, is quite a little trouble.

The Illinois Pure-Food Legislation.—In the Chicago Record we find the following paragraph respecting the Dunlap Pure-Food Bill which was past by the State legislature at its last session:

PURE-FOOD LAW'S REQUIREMENTS.

The pure-food law creates the office of State food commissioner, who, with the advice and consent of the governor, shall appoint two assistant commissioners. One of these shall be an expert in the matter of dairy products, the other a practical and analytical chemist, who shall be known as the State analyst. The commissioner also shall appoint six inspectors. It is made the duty of the food commissioner to enforce all laws that now exist or that may hereafter be enacted in this State regarding the production, manufacture or sale of dairy products or the adulteration of any article of food. He is given authority to prosecute violators of the pure-food laws, and the State's attorneys in all counties are required to render legal assistance when called upon to do so by the food commissoner. The law contains sections which define food adulterations and regulations regarding the branding and labeling of barrels, boxes, etc., together with the penalties for violations of any of the provisions of the act.

We find that portions of the law go into effect, while the balance of it waits until July 1, 1900. The State food commissioner is to be paid a salary of $2,500 a year; two assistant commissioners, $1,800 a year each, and six inspectors $3 a day each.

The important thing is to get as commissioner a man who is absolutely fearless and unpurchasable, if the anti-adulteration laws are to be made effective. We shall be interested to know who is to be that officer. We believe all are to be appointed before July 1, so we will be able to announce them in a very short time.

Apis Dorsata Found and Lost.—As previously reported, Mr. Rambo, the missionary in India, had secured at least part of a colony of Apis dorsata. Gleanings in Bee-Culture for June 15 reports that no queen was found with them, and all dwindled and perisht. A week later another colony was found, and the whole colony successfully hived. Next day they left the hive and brood-comb and settled in the roof of the building, apparently as if to build a comb. Two mornings later they had disappeared, and Mr. Rambo pathetically says, "So I am nowhere in particular." QUES: If Apis dorsata won't stay in a hive in India, will they be any more likely to do so in the United States?

Food of Larval Bees.—Prof. A. J. Cook, in a note to us on the food of bee-larvæ, says this about it:

On page 276 is a note as to the character of the food of the larvæ. I think without doubt it is digested pollen. We often see pollen that even shows its nature as the brood is nearly mature. It is believed that very nearly the same food is fed by the nurse-bees to the queen and drones. Some have contended that this food was a secretion from the lower head-glands. The truth is that this secretion is the digestive liquid of the pollen. The secretion goes with the latter to the stomach, where the pollen is digested, after which it is regurgitated and fed to the brood, queen or drone, as the case may be. A. J. COOK.

Work of the National Association.—In response to the suggestion made in a recent issue of this journal, General Manager Secor sends us the following:

FOREST CITY, IOWA, June 19, 1899.

EDITOR AMERICAN BEE JOURNAL: In the last American Bee Journal, on page 376, there is something more than a gentle hint for the general manager to tell what the United States Bee-Keepers' Association is doing in the interest of bee-keepers.

I am not much of a sportsman, but if I were to go fishing for speckled brook trout I would not send a small boy ahead to throw stones in the pools if I wanted to catch any. And if I wanted to get evidence against any violator of law I wouldn't send Mrs. Grundy ahead to proclaim the object of my visit and investigations. This is why we are not publishing what we are about to do. But as this is a very large country, and as a great majority of offenders probably do not read the bee-papers, it may do no harm to say that the association has already begun the prosecution of violators of pure food laws in a certain city 8,000 miles, more or less, from Manila. We expect to spend $300 to $400 this year in the interest of honey-producers.

We hope to work up some test cases which, if successful, will go a long way toward stopping the fraudulent sale of glucose for honey.

Now, if anybody is interested in this line of work who is not a member of our association, he (or she) is hereby in-

formed that we shall need more funds than are now in sight if we continue the work.

Pure food legislation and impure food prosecutions are the lines of work laid out for especial effort this year. Other matters are also receiving attention, but the largest expenditures will probably be in the direction named.

Yours truly, EUGENE SECOR, *General Manager,*
United States Bee-Keepers' Association.

Now, the foregoing candid statement of proposed effort, and appeal for funds, ought to induce several thousand bee-keepers to forward their dollar membership fees to Mr. Secor at once. It certainly would be discouraging to get into the midst of costly prosecutions and then not have funds sufficient to push them to a finish, and to victory for the association.

There ought to be a membership of at least 1,000 in the United States Bee-Keepers' Association by the time of the Philadelphia convention—Sept. 5. Why not send your dollar now to Mr. Secor, if you are not already a member? Address him thus: Hon. Eugene Secor, Forest City, Iowa. Or, if more convenient for you, send the amount to us, and we will forward it to Mr. Secor, when he will mail you a receipt therefor.

Now, please don't read this and then do nothing. Your help is needed in the work projected and that which is already begun.

Some Honey Prospects in California.—Thomas G. Newman, of San Francisco, Calif., general manager of the National Bee-Keepers' Union, wrote us as follows June 17, in reference to the prospects for honey in Southern California:

The following item from the San Diego, Calif., Daily Vidette, of May 30, 1899, shows that the honey crop in Southern California is better than it was feared it would be. The drouths here are killing, and we had two years of such. This year is much better in the northern part of the State, where we had plenty of rain; but San Diego was not so blest. It is the largest county in the State. The item reads thus:

"The honey crop will not be a total failure in San Diego county, as was predicted before the late rains. It is now estimated that there will be at least a fourth of a crop, amounting in the aggregate to about 7,000 pounds, as the product of the county for this year."

THOMAS G. NEWMAN.

It seems to us there must be a big error in the above paragraph. Surely, "7,000 pounds" is not a fourth of the honey crop of San Diego county in an average year! That would make only 28,000 pounds as the total amount of an annual crop in a fair season. If it is anything like the other honey counties in Southern California, we should think that 140,000 pounds would be nearer the true amount.

Grading Comb Honey by Pictures is being pusht in Gleanings. S. A. Niver was appointed by the New York Geneva convention to prepare a set of pictures, and these appear in Gleanings. There are three grades—Fancy, No. 1 and No. 2—a set of three square sections and another set of three tall sections. Each picture is intended to represent the poorest that will be allowed in its class. The No. 2's have perhaps one-sixth of the surface unsealed. The Fancy and No. 1 sections appear not so unlike but that a novice might have difficulty in deciding their respective places. One is a little surprised to see in the tall Fancy section a dozen or more cells unsealed.

Grading by pictures is not yet an establisht fact, but the whole matter of grading is so complicated and difficult that anything in the line of help should be encouraged. Mr. Niver has certainly struck a good idea in selecting for each class the poorest representative of that class. Editor Root despairs of having a single system of grading that will apply to the whole country. New York bee-keepers would never be satisfied with the Colorado system that puts fancy buckwheat in second grade.

EDITOR H. E. HILL, of the American Bee-Keeper, is now in Florida, and may also go to Cuba, as he has an invitation from Dr. Viete, a resident bee-keeper, who in one season took 180 tons of extracted honey. Dr. Viete "has officiated in the Cuban army as colonel, chief-of-staff of the 1st army corps, and chief health officer." And having been the chief bee-keeper, we think he might as well be called "Chief Viete" instead of Dr. Viete.

* * * * *

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., writing us June 20, said:

"I am fearfully driven with work now, and have sore eyes and a lame back to make work as uncomfortable as possible."

We regret to hear of Mr. Doolittle's temporary afflictions, and trust he may soon recover from them. It is bad enough to have to work hard in hot weather, without having ailments that make the burdens heavier.

* * * * *

MR. THOMAS G. NEWMAN, of San Francisco, Calif., reports in his Religio-Philosophical Journal for June 8, the visitation of an earthquake in his locality. Here is what he says about it:

"Two earthquakes shook up San Francisco and vicinity at 11:20 p.m. on June 1. Crockery, wall ornaments, and glasses were demolisht in great quantities; cornices of buildings, chimneys, cap-stones and mason-work were loosened and fell to the ground; large numbers of people were alarmed, and ran into the streets in scant attire—but no lives were lost, so far as we have heard. The roaring sound and flash of light accompanying it were the cause of much anxiety and foreboding at the time but it soon past away, and things resumed their usual course—the quake lasting less than a minute."

When Old Earth quakes it shakes up things. The sensations felt must be anything but exhilarating in their effects. What with storms, cyclones, tornadoes, earthquakes, etc., life seems pretty uncertain. How helpless, after all, is puny man!

* * * * *

EDITOR HUTCHINSON, in the June Bee-Keepers' Review, writes this paragraph about the reformed spelling:

"So far I have said nothing in regard to the reformed spelling. What I have several times thought of saying, has now been said by Stenog in Gleanings in Bee-Culture. Here is what he says: 'If you will rip up the whole alphabet from A to Z, and have a precise character for every sound, as we have in shorthand, I shall be much pleased.' So long as a system is radically wrong, we gain very little by tinkering with minor results. So long as we attempt to represent 40-odd sounds by using only 26 characters, just so long will there be confusion. Bro. York gives a sample of 16th century spelling. Of course, it looks odd to us, but I doubt if our present spelling, or even the reformed spelling, would not look as odd to the 16th century folks, if they could see it, as their spelling does to us."

We hardly think it is a question whether or not certain spelling "looks odd." It is whether or not we are going to do anything to simplify the spelling for future generations. But we are almost willing to guarantee that if the whole job of reforming the spelling of the English language were done at one time, neither Stenog nor Mr. Hutchinson would be in favor of adopting it. If they are not willing to adopt a few sensible changes, naturally they would not care to undertake a bigger job. Why, if the whole thing were done at once, even publishers and editors could not handle it. It must be done by degrees if at all. No man builds a mansion in a day, but rears it little by little. So with the spelling reform, it can't be done faster than our small abilities can handle it—a few words at a time.

THE G. B. LEWIS CO'S

BEE-HIVES AND SECTIONS

Are Models of Perfection.

***

This is the Verdict of Thousands of Customers and the Acknowledgment of Competitors.

Our unrivaled facilities, coupled with twenty-five years of manufacturing experience, enable us to anticipate and supply every want and need of the bee-keeper, promptly and accurately.

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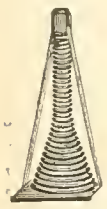

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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118 Michigan St., Chicago, Ill.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

Golden Italian Queens Warranted purely mated; all Queens by return mail; will run 1,200 nuclei; Queens reared by Doolittle's method; safe delivery and satisfaction guaranteed; have 11 years' experience and know what good Queens are.

Queens, 50c each, 6 for $2.75.

300 SELECTED Queens, nice **LARGE** and **YELLOW** all over, at 75c each; 6 for $4.00.

My Queens are prolific and workers, industrious as well as beautiful to look at; hundreds of testimonials prove this. I just now have a nice lot of Queens which have just started to lay.

SPECIAL LOW PRICE on Queens in quantities. Address,

H. G. QUIRIN, Parkertown, Erie Co. Ohio.
Money Order Office, BELLEVUE.

22A21t Please mention the Bee Journal.

In the multitude of counsellors there is safety.—Prov. 11-14.

Will Tallow Prevent the Wax-Moth?

Query 94. If tallow be put in the angles of the rabbets of the supers, covers, and between and under the ends of the frames, will it prevent the wax-moth from depositing her eggs in those places, and supply the place of bee-propolis?—INDIANA.

S. T. Pettit—I don't know.

D. W. Heise—I don't know.

C. Davenport—I don't know.

E. Whitcomb—I don't know.

Eugene Secor—I don't know.

W. G. Larrabee—I don't know.

Mrs. L. Harrison—I don't know.

Emerson T. Abbott—I do not know.

E. France—I don't know; never tried it.

C. H. Dibbern—I don't know. Try the plan and report.

P. H. Elwood—I should think so, but I have never tried it.

R. C. Aikin—I do not know, but suspect it would be a failure.

O. O. Poppleton—I have no experience in the use of tallow in hives.

Dr. J. P. H. Brown—I have never used it for that purpose. I do not know.

Adrian Getaz—It will; but there will be yet plenty of other places left for the eggs.

J. E. Pond—I do not think it will. It will, however, tend to prevent the sticking

Extracted Honey Wanted

As soon as you have any good, well-ripened Extracted Honey for sale, send us a small sample, stating quantity, price expected delivered in Chicago, and how put up. Prefer it in 60-pound tin cans. Expect to be able to place carload lots as well as smaller shipments of Extracted Honey. But don't ship us any until we order. Address,

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Am I prepared to furnish everything needed by the up-to-date bee-keeper, all goods manufactured by THE A. I. ROOT CO., shipt to me in car lots, and sold at their prices. Send for illustrated, 36-page Catalog FREE.

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Please mention Bee Journal when writing.

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—AND—

Comb Foundation.

I have been rearing queens for 20 seasons on the best known plans, and have some choice ones as follows:

1 untested Queen	$ .75
6 untested Queens	3.50
12 untested Queens	6.00
1 tested Queen	1.00
6 tested Queens	5.00
1 selected tested Queen	1.50

COMB FOUNDATION made from PURE WAX. Send for prices. J. L. STRONG,
26A4t CLARINDA, Page County, Iowa.
Please mention Bee Journal when writing.

Root's Column

PORTER

BEE-ESCAPES

FOR THE HIVE
AND HONEY-HOUSE

HAVE NO EQUAL.

Save Time,
Save Hard Work,
Save Stings,
Save cappings to the honey.

No practical bee-keeper
can afford to
get along without them.

Last a Lifetime.

Their great superiority over everything else of the kind has driven all competitors from the field.

For Sale Everywhere.

MANUFACTURERS' AGENTS,

THE A. I. ROOT CO.

MEDINA, OHIO.

of frames fast to the rabbets, which oftimes renders them almost immovable.

Mrs. A. J. Barber—I have never had any trouble with moth, so I have no experience.

Prof. A. J. Cook—I never tried it, but do not think so. It would not banish the moth, I am sure.

G. M. Doolittle—Keep *Italian* bees, and you will not see wax-moth worms enough to talk about.

J. M. Hambaugh—I have had no acquaintance with the anti-moth-propolis method mentioned.

J. A. Stone—I don't know, but I think it would be about as objectionable to the bees as the moths would be.

Rev. M. Mahin—I do not know. I do not believe that the moth lays eggs very often in the places named.

A. F. Brown—Try it and report. Wax-moths do not bother me, and bee-propolis I find everywhere, regardless of conditions.

Dr. A. B. Mason—It will prevent the moth depositing eggs there while it lasts, but in time the bees will remove what they can get at.

R. L. Taylor—I have my doubts about the depositing, but the tallow might destroy the eggs or the moth-worm coming from them.

Dr. C. C. Miller—I don't think the moth would lay eggs in tallow, but I don't believe it would make any difference as to worms in the hive.

E. S. Lovesy—I have never used tallow, and I never have been troubled with moth where there is a bee-space under and around the frames.

Mrs. J. M. Null—I never experimented along this line; however, moths are not a consideration only as they destroy combs which are not in use.

Chas. Dadant & Son—What if it did prevent the moth from laying eggs in corners? There is no room for moth in a strong colony, and there is always room for them in a queenless hive.

G. W. Demaree—I have experimented only enough along this line to learn that tallow and other substances that melt at a comparative low temperature are out of place inside of the bee-hive.

GENERAL ITEMS

Blame It on "the Heat."

"I am not feeling well to-day,
But why I cannot see;
I had some ice-cream 'cross the way
And pancakes home, for tea.
I also had some caramels,
And sugared almonds, too,
And when I met with Tommy Wells
A stick of fine Tulu;
But I was careful with each one,
For much of none I ate.
It cannot be that penny bun,
And yet the pain is great!
I had six cookies, but I've had
Six cookies oft before;
They've never left me feeling bad,
Nor the pickles—three or more.
The soda-water couldn't make
Me ill—'twas Billy's treat.
I sort of think this fearful ache
Comes *wholly from the heat.*"

—Selected.

Northern Illinois Convention.

The bee-keepers of the eastern part of the Northern Illinois Bee-Keepers' Association held the spring meeting at the home of Oliver Taylor, in Winnebago County. The attendance was not very large, owing to the rainy day and heavy losses in wintering. The losses in this vicinity were over

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

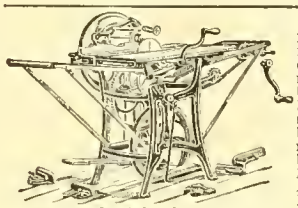
GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

Northern Queens.

IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queens, $3.00 each; the same with untested Queens, $2.25. Correspondence solicited.

MATE WILLIAMS,
20A4t NIMROD, Wadena County, MINN.

Please mention Bee Journal when writing.



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Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

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ADEL BEES

Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

HENRY ALLEY,
24Atf WENHAM, ESSEX CO., MASS.

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Warranted Queens, $1.00; Untested, 75 cents.
9A26t J. D. GIVENS, LISBON, TEX.

EGGS

FROM BARRED PLYMOUTH ROCKS

Thorobred — Fine Plumaged Fowls—Farm Raised—75 cents per dozen.

MRS. L. C. AXTELL,
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Wholesale and Retail.

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INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT FAIL

Before placing your order, to send me a list of what you need in

Foundation, Sections,

And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

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NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

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PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
Plain	2-in. stove.	Doz.	4.75;	" .70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

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OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

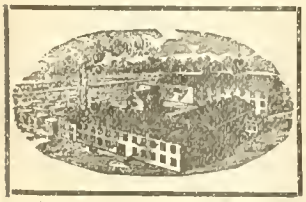
We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. MARSHFIELD, WISCONSIN.



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We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment. *Illustrated Catalog, 72 pages, Free.*

We also manufacture **Tanks** of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

20A13t Please mention Bee Journal when writing.

Please Mention the Bee Journal when writing Advertisers.

half, and as a result the bee-keepers are feeling a little blue. The number of colonies reported in the fall were 470, and only 230 left this spring; besides, those having the heaviest losses are more apt to remain at home.

It was generally thought that the prospect for honey this year is not good, as the white clover and also Alsike is badly winter-killed. As the spring meeting is held at the home of some bee-keeper, for the purpose of seeing his methods of handling bees, and the ladies go along and take their lunch-baskets, you see it is a kind of bee-keepers' picnic, and there is not as much for a report as there would be otherwise.

Mr. and Mrs. Taylor gave us a royal reception, and we were loth to depart.

Some of the questions discust were:

Is it profitable to send South for queens in the spring for queenless colonies?

ANS.: No; double up.

Is it best to double up now?

ANS.: No, not so late in the season.

Don't swarms affected with dysentery in the spring have more brood in hive?

ANS.: Most of the members thought they did. B. KENNEDY, Sec.

Winnebago Co., Ill.

Report from an Old Bee-Keeper.

I am nearly 76 years old and can see and walk as well as ever. I have been used to bees all my life. I have some very fine bees. I never keep over 20 colonies thru winter. I had only one colony to die thru the winter, one robbed in spring, and one queenless, but I soon made the queenless one all right. I can always make a colony with a laying queen all right in a few days. My bees are always on the summer stands all winter. We had no honey last summer, but there is lots of white clover this year, and the bees are wild on it when there is a fine day, but we have had a very stormy time so far.

HENRY WHITE.

Humboldt Co., Iowa, June 20.

Motherwort.

I send a plant specimen which I would like to know the name of. We have the sweet clover here, both white and yellow, and both in bloom, and the bees leave all and go to this plant. There is plenty of white clover here, but bees do not work on it. If what I send is a good honey-plant I will send you some of the seed.

My bees became weak in the winter, but bred up again. JOHN CRAIG.

Macoupin Co., Ill., June 14.

[We sent the plant specimen to our good friend, Prof. C. L. Walton, one of the high school teachers here in Chicago, who reports as follows:—EDITOR.]

The specimen plant sent for identification is commonly known as motherwort. The botanical name is Leonurus cardiaca, and belongs to the great mint family. Nearly the entire family was introduced from Europe, and is proving a boon to bee-keepers on account of the excellent quality of honey obtained from it by the bees.

C. L. WALTON.

[We might add further, that if any of our readers want to have plants or flowers named, they can mail the specimens direct to Prof. Walton, addressing him at 2863 N. Ashland Ave., Ravenswood, Chicago, Ill. He will then reply to them thru the Bee Journal.—EDITOR.]

Prospects for a Poor Season.

My bees have done just fairly well this year. I have had several swarms and but little honey. The season bids fair to be another very poor one in this locality. I am a bee-keeper of some 30 years' experience, and the most of the time a subscriber to the old American Bee Journal. I have read lots of books on bees. I well remember reading many articles from different writers

The Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—

PROF. A. J. COOK.

460 Pages -16th 1899 Edition- 18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisht to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipt, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 10th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two NEW subscribers—simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal (with $2.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

GEORGE W. YORK & CO.
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Hustlers Italian Queens from Imported stock. Untested, 65 cts. each.
24A4t **T. N. BRIGGS, MARION, MASS.**
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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
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QUEENS Either 5-banded, Golden or from IMPORTED Italian mothers, 60c each; or 6 for $3.00. A few fine breeders at $1.50 each. Give me a trial and let me surprise you. Satisfaction or no pay. **CH. H. THIES, Steeleville, Ill.**
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Bee-Supplies.
Root's Goods at Root's Prices.
POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

Italian Queens.
4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

WALTER S. POUDER,
512 Mass. Ave.,
INDIANAPOLIS, INDIANA.
Please mention Bee Journal when writing.

when the Bee Journal was edited by Samuel Wagner. My old friend, James Parsons, and I, used to take it together. I was young then, but now I am 55 years old, and my old friend past away years ago. Our honey plants and trees have also past away, so much so that I can almost safely say that this part of the country that used to be a good bee-country, has been transformed, by the woodman's ax and the farmer's plow, into a very poor one. I have 53 colonies of bees in good double-walled hives. I will write an article for the Bee Journal on my experience some time. G. N. STINEBRING.
Wayne Co., Ohio, June 18.

Changeable Weather.

The honey-flow was very good in May, but only ordinary in June—too wet sometimes, too awfully hot sometimes, and too cool the past week. I have some honey harvested, nice and white, and very thick.
L. A. HAMMOND.
Washington Co., Md., June 20.

No Honey-Flow to Speak of.

Bees are in fair condition. White clover is blooming, but no honey-flow to speak of.
CHAS. D. HANDEL.
Carroll Co., Ill., June 15.

Bees Booming on Clovers.

I have changed my location, coming here with 110 colonies of bees last Saturday, from Walworth County, on account of there being no bee-pasture in my home field. White clover with other clovers nearly all winter-killed there. Here the white and Alsike clovers are abundant. Bees are booming on them now. Basswood will be out in about 20 days. I. A. TRAVIS.
Wood Co., Wis., June 20.

Bad Season for Bees.

I have had 10 swarms this year, and a very little honey. Our last frost was on June 3, and it killed everything. This is a bad season for bees. LAWRENCE BROYLES.
Socorro Co., N. Mex., June 7.

Bees Doing Well.

I like the Bee Journal very much.
It has been very dry here this spring, having scarcely any rain for two months. Bees are doing quite well.
ARTHUR L. MILLER.
Windham Co., Vt., June 19.

Backward Season.

We are having a very backward season here so far, alfalfa is just beginning to bloom, and it has been very dry for the past three months. Many that thought their bees were in good condition lost heavily thru April and May. I do not look for a very prosperous year for the bee-keepers in this section. W. W. WHIPPLE.
Arapahoe Co., Colo., June 19.

Moth in Empty Combs—Other Notes.

I've just returned from the cellar with my darning-needle—a woman's weapon. I was not mending hose, but looking over combs in hives stored there, searching for something I did not want to find. The hives had been cleaned, and combs scraped of everything offensive, and put there to remain until there were swarms to occupy them. The eggs of the bee-moth develop very slowly in a cool cellar, and I look them over every week or 10 days, and pick out all the grubs I find, never allowing one to mature, to lay more eggs. To-day I found one encased in a cocoon, and about half a dozen grubs in a score of hives. I look them over until all the moth-eggs have hatcht, and as no miller can gain access to them they will be safe from their ravages during the summer.

I had expected swarms to put into these

4,000 Pounds
is the guaranteed capacity of this wagon. It is equipped with
ELECTRIC STEEL WHEELS
with stagger oval spokes, broad tires, etc. It has angle steel bounds front and rear. It's low down and easy to load. One man can load it; saves an extra hand in hauling corn fodder, etc. A pair of these wheels will make a new wagon out of your old one. Send for free catalogue and prices.
Electric Wheel Co. Box 16, Quincy, Ill.
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Italian Queens

Reared by the Doolittle method from the BEST HONEY-GATHERERS.
Untested, 50 cents each; $6.00 per dozen. Safe arrival and reasonable satisfaction.

Address, **W. J. FOREHAND,**
24Est FORT DEPOSIT, ALA.

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hives, but we've had none as yet. Som hives had their porticoes packt full of be I noticed lately that drones were driv out, and I stopt watching for swarms.

Spider-lilies are usually favorites with the bees, but tho blooming beautifully, not a bee visits them in the early morning, as of yore. I noticed lately a field of Alsike clover full of bloom, and the sun shining warm, but not a bee in sight. White clover is blooming, but I've lookt in vain to see a bee working upon it.

Mrs. Stow's bees (see page 358) should have a day in court. I can bear witness to their good qualities. Whenever honey is to be gathered, they store large quantities of a fine product. It does not have to seek a market, but buyers come for it, saying, "I can't find any so nice in the city of Chicago."

In the report of the Chicago Bee-Keepers' convention, in Mrs. Stow's paper on comb honey, she says in reference to hives:

"You would probably call them out-of-date, but rather than make kindling wood of them, and give my good husband the further expense of buying more, I still use them."

Has not Mrs. Stow got her industrious workers, and money to their credit, to buy hives? I heard Mr. Stow say at one of the sessions of the Northwestern Bee-Keepers' Society, "as he had employment in the city, it was possible for his wife to keep bees!" Do their bees have justice?

MRS. L. HARRISON.

Peoria Co., Ill., June 10.

Poor Prospects for Honey.

Prospects for a honey crop are very poor here. White clover is all frozen out. I lost half of my bees, and some lost nearly all. I kept them in winter where I had them for years and always with a small loss.

THOMAS O. HINES.

Jones Co., Iowa, June 20.

Bees Can Hardly Live.

The American Bee Journal was a great help to me last year in selling my honey crop. It is very dry here, and bees can hardly get a living. J. I. CLARK.

Addison Co., Vt., June 19.

Too Much Rain for Bees.

We have had a fine spring for bees here, and they have been busy working up to about two weeks ago, when it began to rain, and since then they have been hanging out and have not been doing much. What little clover did not freeze is coming into bloom, and the bees are working on it, but I don't think there will be enough clover in this locality to make a honey crop. But this overproduction of rain that we have had this spring has started up a good, thick crop of blackhart weeds, and lots of the low land has been too wet to plow, which will probably be sowed to buckwheat, which almost always yields nectar. Blue vervain and goldenrod are plentiful along the public highways, which are good honey-plants. I am getting sweet clover started all along the roadside, which I think is a very good honey-plant, and much healthier than ragweeds, which I don't think yield much honey. Sweet clover will adapt itself to a variety of soils; it should be sowed two years in succession, then you will have one crop of clover coming into bloom every year.

So far I have had but one natural swarm. At present I have 65 colonies in fine condition, and expect some more swarms soon. I run my apiary for extracted honey, and think it pays best in a locality where we get just a short honey-flow in the fall, like we had last fall. Of course, what is best for me may not be best for somebody else. Almost everybody buys syrup and pays 40 cents a gallon. Now if we bee-keepers can furnish them a genuine article of extracted honey at somewhere near the price they have to pay for syrup, they will always take honey. Every bee-keeper ought to try to get his

neighbors to eat honey. All children, as a general rule, are fond of sweets, and I think honey is one of God's purest sweets. I have kept bees for eight years, and have never shipt a pound of honey. Last year I sold something over 400 gallons right at home, and I could have sold that much more. I am askt pretty nearly every day if I have some more honey to sell yet, and almost always the person will say, "When you get some honey let us know."

I think it pays better to sell honey to the neighbors, if we can realize as much out of it as we could by sending it to some distant market.

About 25 percent of the bees died in this neighborhood. I have been out gathering up old combs where bees have died. Farmers as a general rule do not know the value of old combs, and are glad to get the hives cleaned up for the combs.

Henry Co., Ill., June 27. JACOB WIRTH.

Too Much Rain.

Bees are doing rather poorly owing to the excessive rains we are having. I have 107 colonies, which are almost without stores, and will have to be fed soon if the rainy weather continues. The sweet clover here will be in bloom in about a week

J. F. ROSENFIELD.

Cuming Co., Nebr., June 19.

Convention Notice.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.

Hutto, Texas.

Queens Untested Italian, 70 CTS EACH—3 FOR $2.00. TESTED $1.00 EACH. Satisfaction GUARANTEED. Catalog free. Address, THEO. BENDER, 8Atf CANTON, OHIO.

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CHAS. F. MUTH & SON.

I wish to announce to my friends and patrons that I have this day sold to C. H. W. WEBER, of Cincinnati, my Honey and Bee-Keepers' Supply business, known for the past 38 years as CHAS. F. MUTH & SON. Mr. Weber will continue to push the Langstroth hive and everything pertaining to same; besides, he has secured the agency for Mr. Root's goods, and will sell them at his prices. I beg the customers of the old house, to whom I wish to extend my thanks, to continue their patronage with Mr. Weber, by whom I am sure they will be accorded fair and honest treatment.

MRS. ANNIE MUTH (Widow.)

Cincinnati, Ohio, April 7, 1899. 15Atf

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Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

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Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others. Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 19.—Not any comb honey on the market except buckwheat and other dark grades. We look for new crop to start in at about 13c for best grades of white; light ambers and off white 10@12c. Extracted selling at 5@7c for ambers, and 6@8c for white, according to quality, color and package. Beeswax steady at 26@27c.

R. A. BURNETT & CO.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices; Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, June 14.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Market is firm, with very little now offering, either new or old. This year's crop of California honey is light, and there is nothing to warrant anticipating low prices the current season.

KANSAS CITY, June 22.—New white No. 1 comb 15c; No. 1 amber, 14c. New white extracted, 6c; amber, 5½c; dark, 4½@5c. Beeswax, 24@27c.

C. C. CLEMONS & CO.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & CO.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it.

PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.

M. H. HUNT.

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will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

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Including their discounts for goods wanted for use another season. It will pay you to send me list of goods wanted. Cash for Beeswax.
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To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

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Because in 22 years there have not been any complaints, but thousands of compliments.

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PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.
The following dealers handle our Foundation:

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E. T. Abbott, ... St. Joseph, Mo.	Pierce Seed and Produce Co. ..... Pueblo, Colo.
L. C. Woodman ..... Grand Rapids, Mich.	F. Foulger & Sons ..... Ogden, Utah.
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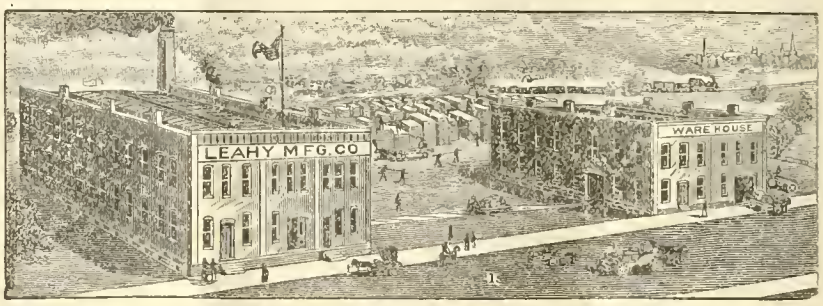

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Perhaps you use **CARTONS.** If so, we can fit you out, as we are bottom on Cartons. Send for a sample and prices, anyway.

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Catalog free describing our full line of APIARIAN SUPPLIES.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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24 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying 24 cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JULY 6, 1899. No. 27.

CONTRIBUTED ARTICLES

First Introduction of Honey-Bees into California —Extravagant Prices Paid for Bees and Honey.

BY J. M. HAMBAUGH.

I AM indebted to our old pioneer bee-keeper, Mr. J. S. Harbison, for the information herein given, as gleaned from his valuable work, entitled, "The Bee-Keepers' Directory," publisht in the year 1861. Mr. Harbison is still living, and is a highly respected citizen of a city in San Diego County.

The following letter from one of the earliest and most successful apiarists of this State, contains an authentic account of the introduction of the first bees into California, as well as the success attending their first five years' cultivation in San Jose valley:

AN OLD LETTER ON EARLY CALIFORNIA BEE-KEEPING.

SAN JOSE, Jan. 11, 1860.

MR. J. S. HARBISON—

Dear Sir:—Yours of the 26th of December propounding certain inquiries, has been received.

The first bees were imported into California in March, 1853. Mr. Shelton purchast a lot consisting of 12 colonies, of some person to me unknown, at Aspinwall. The party who left New York became disgusted with the experiment, and returned. All of the hives contained bees when landed in San Francisco, but finally dwindled down to one. They were brought to San Jose, and threw off three swarms the first season. Mr. Shelton was killed soon after his arrival, by the explosion of the ill-fated "Jenny Lind."

In December two of the colonies were sold at auction to settle up his estate, and were bought by Major James W. Patrick, at $105 and $110, respectively.

Mr. Wm. Buck imported the second lot in November, 1855. He left New York with 36 colonies, and saved 18. I purchast a half interest in them. I also, in the fall of 1854, bought one colony of Major Patrick, from which I had an increase of two. Mr. Buck returned East immediately, and arrived in February, 1856, with 42 colonies, of which he saved but seven. Our increase in 1856, from the 28 colonies, was 73. We also had about 400 pounds of honey in boxes, which we sold at from $1.50 to $2.00 per pound.

Mr. Wm. Briggs, of San Jose, brought out, in the spring of 1856, one colony, from which he had an increase of seven or eight swarms the following summer.

The above were the only importations I know of prior to the year (spring) 1857, which covers the ground of your inquiries. There are in our county at this time about 1,000 colonies. Very respectfully, F. G. APPLETON.

Mr. Harbison then continues the account as follows:

MR. HARBISON'S EARLY EXPERIENCE.

In the fall of 1855 I sent East and had one colony of bees brought out, which arrived in Sacramento, Feb. 1, 1856. Tho most of the bees had died or escaped from the hive during the passage, enough remained to prove that by careful handling they could be imported with little loss, and that they would increase and store large quantities of honey when here. I left San Francisco, May 5, 1857, on board the ship "Golden Gate," on my way East, for the purpose of preparing a stock of bees for shipping to California. Sixty-seven colonies were prepared from my own apiaries, situated in Lawrence Co., Pa. They were taken to New York and shipt on board the steamer "Northern Light," which sailed from that port Nov. 5, bound for Aspinwall.

The bees were put on board in good order, were placed on the hurricane deck, kept well shaded and ventilated, and arrived at the latter port on the 15th of the same month, being 10 days from port to port. Having arrived at Aspinwall in the forenoon, and ascertained that no passengers or freight would be sent forward before the next morning,

Mr. J. S. Harbison.

I obtained permission to open the hives on the company's grounds, and let the bees fly during that evening, which greatly relieved them, and contributed to their health during the remainder of the voyage. The hives were closed up, and placed on board the cars, crost safely to Panama, and reshipt on board the steamer "Sonora," and sailed from that port on the evening of the 16th, bound for San Francisco, where she arrived on the evening of the 30th.

The bees had ample stores within their hives before they were started to last them thru their long journey. I neither watered nor gave them additional food during the

whole trip, except what they obtained at Aspinwall. During each day's confinement the bees labored incessantly to gain their liberty, but as soon as it was dark they always became quiet, and remained so during the night.

At San Francisco the bees were transferred from the "Sonora" to the steamer "New World," and landed in Sacramento on the morning of Dec. 2, 1857, thus terminating a journey of 5,900 miles, which was at that time the longest distance that bees had been known to be transported on one continuous voyage.

On opening the hives I found that considerable numbers of bees had died in each, and that in five all were dead. Some hives were found to contain so few bees that they were united with other weak colonies, till the number was reduced to 50. The stock was still farther reduced by sale, so that 34 colonies of bees remained on the first of April. These were increast to 120, most of which were sold in the summer and fall of that year.

Again on the steamer, Sept. 20, 1858, I returned East for the purpose of transporting another stock, which had been prepared for that purpose during the previous summer. On Dec. 6, in company with my brother, W. C. Harbison, I sailed from New York with 114 colonies, and arrived at Sacramento Jan. 1, 1859, with 103 living. Of this importation 68 were from Centralia, Ill.; the remaining 46 were from Lawrence Co., Pa.

Owing to the lateness of the season of shipping, and unfavorable weather during the first three weeks after our arrival, we were only able to save 62 out of the whole number: these, together, with six good colonies remaining from the previous year, we increast to 420 colonies, including the 68 old ones; 300 of them filled standard hives, and the remainder averaged half full. The increase was all made on the artificial principle (as laid down in this work).

Of the modes of importing bees to California, the most novel was that of Mr. J. Gridley, who brought four colonies across the plains from Michigan, placed in the rear end of a spring wagon. He arrived with them in Sacramento on Aug. 3, 1859, in good condition. His plan was to feed them, and in addition stop occasionally in the afternoon and allow the bees to fly out and work till dark, when they were closed up, to resume their journey early on the following morning. This was repeated from time to time, as they required their liberty. J. S. HARBISON.

Mr. Harbison gives authentic records of other importations that soon followed, several instances are recorded of failures, and the introduction of *foul brood*, which made bad work for the early-day apiarists.

San Diego Co., Calif.

Foul Brood, Careless Bee-Keeping, and Other Matters.

BY MRS. EMMA WOODMANSEE.

WE read in nearly every bee-paper we pick up articles on foul brood, size of hive, wintering, amount of stores required, transferring, and a number of other things that sometimes seem monotonous: but I have just had a little experience that has taken the conceit all out of me, and in the future I am perfectly willing to read everything that can be written on any of these subjects.

A neighbor of ours bought about 100 colonies of bees late last fall without investigating them; he lost quite heavily during the winter, and was suspicious of the cause. So he called in the services of the county bee-inspector, and as we are very much interested in bees, and being desirous to learn all we could, we donned our veils and went over to watch the operations of the inspector on about 100 colonies.

We first discovered that our own bees were getting supplies from some source, but as the spring is very late here we were at a loss to know where it came from. They were also working on bran or meal, as they came in loaded and white as millers.

When we got there we found about 20 hives sitting about or piled up, from which the bees had died, and millions of bees were trying to clean up those frames, while in the barnyard was a covered bin where chop or bran had been kept, and there was probably two or three bushels of meal still there. The inspector lifted the loose cover to show us, and such a sight I never saw—such a mass of squirming activity, rolling and tumbling till they were white all over, and I said, "No wonder our bees are bringing in supplies."

In looking thru this apiary, he found four colonies that were slightly affected with foul brood, but with a good chance to scatter it over the whole neighborhood, as a good many people in this part of the city keep a few colonies in their back yards.

I am glad to say that the inspector was very careful in all his work with those infected colonies, not to leave anything that could possibly be carried off by other bees. He was also careful to impress upon us all the great importance in cleansing the hands of the operator, and all knives and other tools used about the infected colony before opening the next hive.

But I must also add right here, that I have visited the place again since then, and I find that the owner is decidedly careless, and does not even now seem to realize the fatality of the disease, as there are old combs, wax, honey, hives and frames scattered everywhere, as he said, "for the bees to clean up." Truly, we feel alarmed as we are very much attacht to our bees, and dread the disease.

In regard to hives: There was a good opportunity to draw comparisons, as he has at least a dozen different sizes and makes. We noticed especially that all his colonies in 8-frame Langstroth hives were very weak, both in supplies and bees; those in 10 frames, and some in 11, were much better; and those in the very deep frames with closed ends were very strong for the 11th of April, both in bees and honey, some having solid frames of honey and an abundance along the top-bars. Some of these strong colonies had drones hatcht and crawling over the frames; these large hives contained 10 and 12 frames, at least 13 or 14 inches deep. Two colonies in sectional hives with small frames in each section were very weak.

We especially noticed that the colonies on 10 and 12 deep frames were the strongest, and had wintered best. All these colonies were in single-walled hives, and wintered on the summer stands without any protection, and even the piece of muslin, or burlap, that had been laid over the frames didn't cover more than two-thirds of the frames, and this in some of the strongest colonies. We found only two or three frames with mold on them, possibly because they had plenty of upward ventilation.

Now, after all that we have read in the American Bee Journal and other papers about the size of hive, amount of supplies, ventilation, depth of brood-frames, etc., we find that the best way to decide is to see what success people have with a number of different ones side by side. Our own bees are all in 8-frame dovetailed hives, but we have decided that a frame that will hold plenty of honey above the brood-nest is the best, and at least 10 of them.

As to ventilation, well, we have always taken great pains to give our bees plenty of packing on top, and in a sheltered place, and ours are much weaker than those of our neighbors which had no protection. Sometimes I think we can coddle our bees too much, the same as some people do their children. The children of some of our poor people are on the street half the time, bareheaded and barefooted, and half clad, yet they scarcely know what sickness is; while the children of many fond parents, with every want supplied, are invariably delicate. Surely, we will have to try to reach the happy medium, especially with our bees.

I spent a good deal of time last winter in reading bee-literature. I brought out all my old journals, then read a year's numbers that a friend gave me of 1891 and 1892; also Gleanings in Bee-Culture for 1895, Doolittle on queen-rearing, and "A B C of Bee-Culture," and I assure you it was time well spent. There are so many things we read carelessly the first time that are new when we read them again.

Arapahoe Co., Colo., April 15.

Making of Nuclei --Open Letter to Mr. Doolittle.

BY DR. C. C. MILLER.

MR. DOOLITTLE, I have read with interest your article beginning on page 370, and I trust I shall always have the grace to receive kindly any criticism made upon any writing of mine, so long as the criticism is given in a spirit of kindness.

I think you misinterpret the question referred to on page 198. You interpret it to mean that "Iowa" meant to start nuclei, then, after queens were laying in the nuclei, to hive natural swarms in them. A careful weighing of all he says will hardly warrant such view. You hinge your interpretation upon "Iowa's" saying, "hive the new swarms." If that expression stood alone, it would be all right to view it as you do. But you must take *all* that is said, for writers are not always entirely felicitous in their

expressions, and sometimes say something quite different from what they mean. Careful a writer as you are, you give an example of the same kind in your present article, on page 371, where you say, "The nucleus and new swarm combined should be boxt." Of course you do not mean that they should be put in a box, and the older readers will have no difficulty in catching your meaning.

It is by no means an uncommon thing to hear a colony called a "swarm," and I think that is the meaning "Iowa" attaches to the word when he says "hive the new swarms." The very fact that he says "*new* swarms" is pretty good evidence that he thought of all his colonies as swarms, and speaks of the *new* swarms in contradistinction to his 14 *old* "swarms." So I think he was referring to the nuclei or new colonies that he intended to make, and not to natural swarms that he expected to issue. One who commits the inaccuracy of saying swarm for colony might easily be expected to say "hive" when speaking of putting bees in a hive to form a nucleus. Indeed, it is not so glaring an error as to say "swarm" for "colony," and I think it would not be the first time if a man should say, "I took two frames of brood and bees and hived them in a new hive."

I said you must take *all* that is said. "Iowa" distinctly and specifically says he intends to increase "by dividing." If he forms nuclei and then puts natural swarms in with the nuclei, that would not be "by dividing," as the term is always understood. If he rears a queen in a nucleus, then puts a natural swarm in the same hive with the nucleus, he will lose a queen by the operation, and be none the better off for having formed his nucleus. It is hardly supposable that he is so lacking in intelligence as to propose anything of the kind. So it seems to me your interpretation is hardly legitimate.

You say, "I have concluded to answer the same lot of questions myself, and then the readers of the American Bee Journal, as well as the Doctor, can see how we agree in the matter." It hardly seems there can be any intelligent comparison of views when we are answering questions materially different, as the questions are made by our different interpretations.

In order that there may be any fair opportunity to see how we agree, suppose we answer categorically the same questions. I will send the editor a numbered list of the questions I understood to be involved in the case, together with a list of answers. He will send the questions to you, then when he gets your replies, he can print at the same time the questions and our replies. The questions I shall send will be just the ones I understood "Iowa" to mean, and just in the way I think he meant them. If you think it unfair for me to have the chance to formulate the questions, you will please formulate another set to suit yourself, and we will both reply to them. Then we can tell something about how we agree, for as the matter now stands it would be impossible to tell just how far we agree by reading the replies we have each made. McHenry Co., Ill.

Various Remedies Suggested for Bee-Stings.

BY C. P. DADANT.

THERE is no end to the list of remedies offered for the sting of a bee. That none of these are infallible probably depends upon the fact that the wound made is very minute, the sting itself being very much finer than the point of the finest needle, which, when compared to it, looks thru the microscope like a coarse bar of blunt iron. So the remedies we apply have little if any chance of being put where they will do good, as it is only thru the pores of the skin that they can have any influence, while the poison, forced under the skin, has been distributed into the blood thru the minute veins and arteries.

Owing to its great fluidity its distribution into the system is about as prompt as that of a similar quantity of alcohol. For this reason the best remedies are perhaps ammonia, or spirits of camphor, but writers also recommend carbolic or phenic acid, lime-water, salt-water, cold water, yellow clay dissolved in saliva; and among vegetable remedies, honey, oil, vinegar, mint, raw onions cut in two and applied on the wound, bruised parsley, etc. Others advise rubbing, or sucking the wound. Suction will help if done at once, but after a few seconds the poison has dissolved and spread into the blood. Cold water alleviates the irritation, and is good when the stinging is very painful, but it does not cure it. Rubbing simply serves to spread the irritation to a greater surface, and prevent local swelling. It is not to be thought of in cases of severe stinging.

It is very probable that of all these remedies the most practical is ammonia, if it can be used promptly on the skin, as it will penetrate readily, and, in cases of very severe stinging, it has been recommended internally in small doses mixt with water. It is quite likely that severe cases of stinging may be treated successfully by the methods used in cases of snake-bites. Authorities seem to agree on the bee-poison being a strong acid which can only be neutralized by alkalis acting directly upon it, and it cannot well be reacht when in the system, except by internal remedies.

The reason why so many remedies are recommended, each having its supporters, is made very plain by Reaumur. He says that one of his friends, named Du Fay, having been stung on the nose by a bee, tried olive-oil on the wound and found that the pain was stopt in a few instants. Reaumur then tried the same remedy on one of his servants who had also been stung, and the result was the same, the wound did not swell, and the pain disappeared promptly.

This seemed to prove the remedy good, so he again tried this method on the following day on another person who had been stung on the forehead, but altho the man at first imagined that this had cured him, a quarter of an hour had scarcely elapst before his forehead was swollen so that he could hardly open his eyes. Other trials evidenced to Reaumur that the more or less pain the greater or less swelling was due not to the remedy, but to the location of the wound, to the greater or less amount of poison injected into it, and above all to the physical condition of the person stung, some persons being very sensitive to stings, and suffering greatly from a small amount of venom, while some others are almost entirely immune, either from previous inoculation of the same kind of poison, or by their peculiar and natural physical condition. So one person will be able to withstand two dozen bee-stings about the body without apparent suffering, while another may become very sick from a single sting.

That inoculation of this poison is a help against further suffering is evidenced by hosts of apiarists. I have myself, every spring, the evidence that the system becomes used to the poison, for at the beginning of every season I suffer far more from the first stings received than from others later. It would seem that in all diseases Nature labors to furnish an antidote.

But to a novice it looks rather discouraging to have to become inoculated by stings in order to become proof against them. Many persons hesitate to work with the bees for fear of the stings. Yet in the majority of cases it takes but little firmness to overcome the first dread. The pain, like many other nervous pains, is most excruciating if you dread it, but becomes slight when the first fright is over.

Then with a little care and proper handling no one need be stung to any extent. We may be kickt by a horse, we may be bitten by a dog, yet the fear of kicks or of dog-bites will never prevent us from keeping and handling useful animals. Hancock Co., Ill.

Apis Dorsata—Information About It.

(Extract from Dr. Watts' Dictionary of the Economic Products of India, republisht in Gleanings in Bee-Culture.)

DESCRIPTION.—The bees of this group differ from Apis mellifica in being larger; in building 4½ cells to the inch; in the shape of the abdomen; in having 13 rows of bristles forming the pollen-basket; in the relative positions of the eyes and ocelli, and in a very slightly different arrangement of nervures of the anterior wings. It would seem that this bee does not build larger cells for drones than for workers, and that the drone is similar in shape and size to the worker, differing principally in the head, which resembles the head of the drone of Apis mellifica. It builds one large comb, 3 to 5 feet long, two or more deep. The brood-comb is 1¼ inches thick, and the store-comb much thicker. Altho both Apis dorsata and Apis florea are normally single-comb bees, under exceptionally favorable circumstances they build a second comb, and their single combs are built much larger than otherwise usual: *e. g.*, Apis dorsata building in rock cavities; and a comb of Apis florea built in a dwelling-house was found to be about 5 feet in area, in addition to being in some places double, the comb of this bee being usually single, and perhaps less than one foot in area. Probably in all these very large nests there are several queens, and they are not comparable to single colonies of Apis mellifica. The arrangement of the stores and brood is the same as in other species. Apis dorsata, as found in India, is exceedingly constant in size and color. It is found in forests, but frequently builds in town. It is re-

puted to be very vicious; but unless disturbed it does not attack, and could be handled by some of the measures usually employed by bee-keepers.

HABITAT.—Apis dorsata is found all over India, but not at great heights above sea-level. It is said to be found at 2,000 feet or more in Bhutan, but may justly be termed a tropical insect indigenous to the plains.

ECONOMIC INFORMATION.—The large size of the comb and bee has excited hopes of this insect proving, under cultivation, of great economic value, and European bee-keepers have endeavored to obtain colonies of it. Mr. Benton, a dealer in foreign bees, went to Ceylon for the purpose; but he was unfortunate in his efforts, for the queens died. He states he does not consider them so vicious as reputed, when once hived, but he gave up the attempt to cultivate the species. Several years previously, the writer undertook to obtain colonies, if likely to prove useful in Europe, but did not hive any, as it was considered better first to investigate the economic value of other Indian species. The reasons against any attempt to cultivate Apis dorsata in hives are:

1. It builds naturally in the open. 2. It builds normally only one comb, so that the honey cannot be removed without removing the brood also. 3. Altho it builds a very large comb, this one comb is not so great in cubic capacity, normally, as the combs built by a colony of Apis mellifica, which is readily cultivated and well understood already. 4. It is found only in a tropical climate, and in this respect differs from Apis mellifica and Apis Indica, the most productive varieties of which are apparently indigenous to localities having more or less severe winters.

Apis dorsata probably might be cultivated in a semi-wild state in the forests, and the produce largely increast by this means. The present practice of indiscriminately robbing every colony found of all its comb, stores and brood, might be replaced by a more rational mode of procedure; for, altho not hived, many of the processes applied in the economic management of Apis mellifica might be applied to the semi-wild Apis dorsata. The bees might be fed to stimulate breeding or to prevent starvation. Excessive swarming might be interfered with. Certain colonies might be selected to breed from, as in the old style of bee-keeping. It might be found practicable to remove only portions of the comb, and the bees might be induced to build on or in artificial structures more accessible than the branches of trees.

Large quantities of both wax and honey are taken in the forests from Apis dorsata. This wax appears to be bought by dealers, and some is exported. The honey is sold and mostly consumed locally, but is commonly of very inferior quality, being contaminated with pollen, the juices of larvæ, etc. It is also commonly thin, and liable to fermentation. The use of a simple extractor, care being taken to ripen when necessary, and to grade it instead of mixing good and bad together—these and other simple improvements would greatly increase the value of the honey.

It appears highly probable that most of the honey produced by bees building in open air is thin, and requires ripening by evaporation to remove its liability to fermentation. Out of 60 to 70 specimens sent to the Calcutta exhibition, very few were free from fermentation.

Should a Laying Queen be Given the Parent Colony?

BY C. M. DOOLITTLE.

A CORRESPONDENT wishes me to tell the readers of the American Bee Journal whether I think it advisable to give a laying queen to the parent colony immediately after it has cast a prime or first swarm, as is advised by some.

This is a very interesting subject, and one which has much to do with our honey crop, if we are situated in certain localities. The whole matter of profit, resting on whether we should give such a queen or not, must be decided by our location. If the locality gives a continuous yield of honey, then the giving of a laying queen immediately after the first swarm issues will prove a profitable investment; but if the location is one like the average location, which gives a good yield of honey at one or two stated periods during the season, then the giving of a laying queen at the time of swarming will generally prove decidedly unprofitable.

Among my earliest recollections in bee-culture was the story that the bee-keeper who wisht to secure the best results from his bees should have on hand, and give to colonies, queens as above, and the reason advanced for so doing was that the time lost by the parent colony in rearing another queen to take the place of the one going with the swarm was equivalent to another swarm of bees. I have experimented largely along this line, and the truth of the statement—that the time lost by the bees in rearing a queen in natural swarming is equivalent to a swarm of bees—is the first reason that it will not prove successful in locations similar to my own, which gives, at most, only two honey-flows each year.

If it were bees I was after, the case would be different. With me, white clover yields only enough honey to keep the bees breeding nicely, and prepares them so that they swarm mainly from June 15 to July 1. Our honey harvest is from basswood, which blooms from July 5th to the 15th. Now all who are familiar with natural swarming know that the bees are comparatively few in numbers in spring, and increase by the rapidly-increasing brood produced by the queen, which, in due time, hatch into bees until a swarm is the result. By giving a laying queen to a colony immediately after it has cast a swarm, we bring about the same result (swarming) as before, for we place the bees in the same condition. The only difference is, that having plenty of brood they build up quicker, and are prepared to swarm in a shorter time. As this second prime swarming, brought about by giving the laying queen, comes right in our basswood honey harvest, it cuts off the surplus honey; for it is well known that bees having the swarming-fever do little or no work in the sections, and if allowed to swarm, the object we have sought after (section honey) is beyond our reach. If this laying queen had not been given, and we had workt so that no after-swarms had issued, we would have found that the young queen, which was to become the mother to the colony, would have emerged from the cell, as a rule, in eight days after the swarm issued, and in ten days more she would be laying, which would bring the time of her first eggs at about the time basswood would be yielding honey nicely.

During the period between the time when the swarm issued and the young queen commenced laying, the bees, not having any brood to nurse for the last half of the time, consume but little honey; hence, as fast as the young bees emerge from the cells they are filled with honey, for bees not having a laying queen seldom build comb, nor take willingly to drawing out foundation in the sections. Thus, when the young queen is ready to lay she finds every available cell stored with well-ripened honey. At this point the instinct of the bees teaches them that they must have brood or they will soon cease to exist as a colony. A general rush is now made for the section; the honey from below is now carried above, so as to give the queen room, and in a week to ten days we have, as a result, the sections nearly filled with honey, and fully completed a day or two later, if the season is not unusually unfavorable.

In this way good results are obtained in such a location as this, while, if a laying queen is given, the basswood honey season is nearly or quite used up by the colony becoming "sulky" with the swarming-fever, if they cannot have their own way.

After basswood we have a honey-dearth, hence the bees from the introduced queen are of no practical value, but, on the contrary, become useless consumers. On an average, it takes 21 days from the time the egg is laid to the perfect bee ready to emerge from the cell. Then if the colony is in a normal condition, this bee does not commence labor in the field till 16 days old; hence the egg for the honey-gathering bee must be deposited in the cell 37 days before the honey harvest begins, or else they are of no value as gatherers from the fields, altho they may do some inside work in the hive near the end of the basswood harvest. As basswood is all gone before the eggs of the introduced queen become honey-producing bees, and as the larger part of them die of old age before buckwheat or fall flowers yield honey, a great gain is made all around by letting each old colony having cast a swarm rear its own queen, for thereby we do away with the desire to swarm in the midst of the basswood honey-flow, and the expensive feeding of the larvæ, which are in turn to become expensive consumers of the honey of the hive.

These things are well worth looking into by every person keeping bees, for if brood-rearing is used advisedly, with an eye on our location, we shall find that great profit will result therefrom. Onondaga Co., N. Y.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

HAND-SHAKING CONTAGION ALL AROUND.

What an assortment of diseases presidential candidates must have at the close of a campaign, if Dr. Peiro's anti-hand-shaking raid on page 331 is well founded! And, alas, perhaps we dissentants are only but dogs, chained to the hind axle of the car of progress. In spite of our hanging back and yelping, on it goes, and we with it. Give us facts and statistics, Doctor; and when we've had *enough* of them we'll give hand-shaking up, and wave at each other. It may be different with soft-handed, in-door folks, but we (some of us) incline to incredulity about a hard-handed, laboring-man catching anything by a shake. Drum up some itemized facts, and fire them into us.

But, let's see, Doctor; if we learn the A of your reform, won't we have to learn B also? There's the habit of knocking on doors now. The human knuckles are very liable to abrasions—and alas for the millions of poor bee-keepers who have died of leprosy or thunderstroke, caught by knocking on doors, where some leprous or thunderstruck chap had knockt just before!

FRAME FOR EXTRACTING.

C. A. Bunch, page 321, is just longing to "climb up some other way" with his deeper frame for extracting, when up thru the narrow way of perforated zinc is the true gospel. With any kind of frame above or below, the queen goes up too much.

SCREENS FOR MOVING BEES.

Davenport's moving screens, made to telescope on with eight bits of lath, and then be tied with two big strings, are doubtless practical; but, then, wire-nails are also practical, and so much simpler. Page 322.

BUSINESS ON A BUSINESS SCALE.

This is business on a business scale, I thought as I read a long way into Herbert Clute's article, on page 322; but where is there anything to comment on? Toward the latter end I began to find plenty of comment-ables. Nice and unique to have each colony store five or six pounds of stump honey from the winter's choppings. My skepticism found food in that aster honey alleged to be better than basswood. Still, may be he's right. Here asters are abundant late in the season, and seldom or never seem to yield any surplus—perhaps because they do not bloom until surplus-promoting weather has all gone by. It is a composite flower, however, with the general flavor of its order, and why should it yield other than fall-flower honey?

The bee-yard, graded into the side of the hill was one of the best things—cellar just pusht still further in. What with the grading, and what with the trees all round, no tight board fence could begin to equal it. A moderate amount of hoeing ought to keep weeds from getting any hold there, and secure that high desideratum—a perfectly clean yard.

But, on the whole, that groceryman is my choice. Actually makes honey the centerpiece of his show-window—big barrel of candied basswood honey with the staves all taken off, sliceable with cheese-knife, and provocative of endless questions—and sales. No wonder it all went in a week. First have a really good thing; then give the public mind a right good stirring up. See?

THE GENDER OF BEE-PRONOUNS.

And "Afterthought" must be afterthoughted itself, this time. Page 324. I used to get mad when the editor (of the ancient "Exchange") changed the gender of my bee-pronouns (thought I understood our splendid and delicate and expressive English language as well as he did, don't you know?) but I never said anything—just kept right on, same as before, and by and by he got tired of reconstructing me. This time I didn't even get mad—laught a merry laugh to see that they had mist one at last, out of a string of wrong-speckled pronouns. It was "his" and not "its" voyage that went to wreck.

And at this point let me stop laughing, and soberly take a teacher's chair and tone. Interest and sympathy are great elements to conjure with when we write. No one *can* have very much sympathy when a little organism has *its* voyage wreckt. But when reading how a little *fellow* had *his* voyage wreckt there is, almost necessarily, a touch of pathos. The ideas, "little fellow" and "its," refuse to fit together, don't you see?

PAINTED QUEENS.

Who knows whether painted queens (page 330) would stay painted? or whether, like black walnut stain on a boy's hands, Nature has some trick whereby paint would gradually disappear? 'Tater is quite sure that those who actually paint actual queens will know more about that manipulation than those who stop at reading and reflection.

HONEY-DEW FROM THE SKY.

On page 332, we score one more man who has seen honey-dew fall from the sky—W. T. Alexander. *Enough* such witnesses will convince us—just as enough grasshoppers will stop a train of cars. It's a little hard on the grasshoppers, tho—and perchance a little trying on those who throw themselves before the wheels of our incredulity, as Mr. A. does here.

"PETER PIPER PICKT A PECK OF PICKLED PEPPERS."

And behold No. 22 confronts us with the faces of 17 Canadians—no relation whatever to the forty ——. Happens to be the first time I have seen the "Picker"—D. W. Heise. 'Pears like the Kanuckshire pickings are not very tall, if so short a picker can pick 'em so nicely.

VALUE OF BEES IN POLLINATION.

On page 338, Prof. Cook, as usual, speaks with a master's authority. I cull two ideas for repetition: 1. Other insects did once do something at the pollinating service; but *when we mass fruits in great orchards* the hive-bee is the only practical resource. 2. The fact that Nature is disinclined to, and often refuses altogether, *near* fertilizations (same flower, or same exact variety) is a sure and undeniable thing. This thing is the underlying fact which calls peremptorily for the presence of bees. Let us be diligent in the work of convincing our fellows of this, and in keeping it in their minds.

PUTTING ON SUPERS.

Another disagreement. On page 339, C. P. Dadant says for us not to put on comb-honey supers as soon as we do extracting-supers (in certain cases); and Mrs. Axtell, on the very same page, says putting on sections early is the best thing she ever tried to keep down swarm fever. I think I'll be ladies'-man this time.

ALSIKE BOTH LONG AND SHORT LIVED.

Thirty-one successive winters and no winter-killing is quite a record for Alsike (latitude 42 on the Mississippi)—quite a feather in its cap, which ought to count something in our favor eventually. F. A. Snell, page 340. But (bane and antidote) E. S. Miles, page 349, says all his Alsike is winter-killed, and some white clover is left.

COTTONWEED INFORMATION WANTED.

I think Mr. Allen, page 340, should have told us more about the West Virginia cottonweed that yields more than the basswood. We want to get acquainted with it.

PROLIFIC FOUL BROOD BACILLUS.

Two generations in an hour, says Thos. Wm. Cowan, of the foul brood bacillus. That beats the children of Israel in Egypt, decidedly. Twice *one* does not impress us much; but twice the billions and trillions seems like business for a half hour of history. Page 341.

DOUBLE-WALLED HIVE WITH NO SPACE BETWEEN.

H. S. Jones, page 341, is unique in using a double-walled hive with *no space between walls*—tells us *why* he does so pretty well; but still it looks a little like fencing a pasture with no space for grass between the fences. Wonder if he prefers his meals with no between-times.

PUTTING UP FRUIT WITH HONEY.

And so J. H. Hermance's four bushels of plums preserved in honey (two pounds honey to one pound plums) were manifestly too poor to offer to the public till three or four months' time ameliorated them—and then they sold

fairly well. Page 349. To sift out the actual facts from the bee-feverish enthusiasm with which they have got mixt, is quite desirable in this matter of putting up fruit with honey.

DR. MILLER'S FOUNDATION-SPLINTS.

Thanks to Dr. Miller for the full information about foundation-splints, on page 342. Wood separators piled and sliced again—and well cookt in wax—and prest in place just hot enough. We see.

THAT PINK COMB IN MARYLAND.

That pink comb Maryland tells of is so rare in the United States as to provoke doubt about it; but as the commercial beeswax of the island of Jamaica is a deep pink, pink comb must be plenty down there, one would say. Or does a very red propolis bestow the pink?

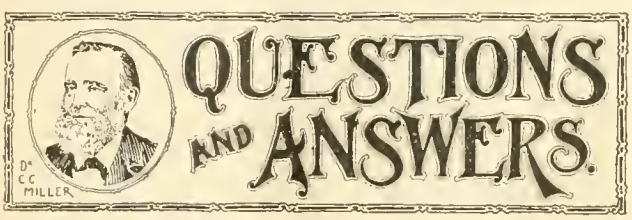
KEEPING ENTRANCES CLEAR OF SNOW.

For deep snows (if you think snow in front any damage) Mrs. Griffith's way, page 350, is tip-top. Wide board set up in front, touching at top, and *not quite* touching at bottom.

SOME RECOVERED FROM THE BEE-FEVER.

End of the bee-fever! Not one of the 28 heavy fellows who answer the questions has tried the Golden method. But possibly the "boys" have not so universally recovered yet.

COGITATOR.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Perhaps a Queenless Colony.

We had two colonies of bees, but one died last winter, and at the other we found a great many dead bees under the hive. This summer, what are left, do not work at all. We think the queen is dead. Do you keep queen-bees for sale?

NEW YORK.

ANSWER.—No, I don't keep queens to sell, but you can get them from those who advertise in this journal. It is just a little doubtful, from what you say, whether it would be advisable to give a queen to your bees. If they have had no queen this spring at all, there will be none but very old bees present, and it will be hard to get them to accept a queen. Moreover, these old bees will now be dying off very rapidly, and at their age will not make good nurse-bees, so even if you should introduce a queen successfully the colony would hardly be worth much. Your better way would be to let these go and start with a new colony. Of course, if it should turn out that they are not queenless, that's another thing.

Preventing Swarming and Caging the Queen.

Our main flow here comes from clover, in May and the former part of June. My plan is to control swarming thru May and work for increase in June, and by so doing take advantage of the flow.

1. Do you approve the plan?

2. In caging the queen above the brood to prevent swarming, is it necessary to put a retinue of workers in the cage with her, or will the bees feed her from the outside, using the Miller cage?

WILLIAM.

ANSWERS.—1. Yes, if you can keep your forces together till toward the close of the harvest it will be better for the honey crop. But look out that you don't adopt some plan that will hinder the bees more than to let them swarm. If you have some plan in mind that you have not yet thoroly tried, better try it on a small scale and not with your whole apiary. If you allow only one swarm to each colony, getting all the working force into the swarm by setting the old colony beside the swarm for a week and then moving it to a new place, your force will be kept together pretty well for storing, and it will be time for you to adopt in general some other plan after you have tried it on a small scale and know it will work well for *you*.

2. No need to put any workers in the cage with the queen. They may die there, and dead bees are poor company. The bees will feed the queen all right thru the wire-cloth of the cage. You speak of caging the queen "to prevent swarming." Now, I'm just a little afraid you're going to get into mischief. Simply caging the queen will not prevent swarming—indeed, if you cage the queen and leave her caged long enough, you'll be pretty sure to make a colony swarm that would have had no thought of swarming if you had not caged the queen. For the bees will rear young queens, and the first one out will be likely to issue with a swarm. But you say you mean to cut out queen-cells. Well, some report good success with that sort of management, and some have not succeeded with it. Don't you go into it wholesale till you know how it will work with one or two colonies. The chances are that you'll not like the plan. I tried it on a pretty large scale, and was not one of the successful ones.

Queen-Bees Wanted—Feeding Bees in June.

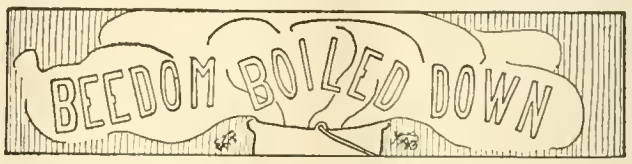
1. If you have queen-bees for sale, please quote prices. I mean pure Italian queens.

2. In this locality bees are gathering very little honey; would it be advisable to feed at this time of the year?

ILLINOIS.

ANSWERS.—1. I have no queens for sale.

2. If the bees are not gathering enough for their daily needs, and if the combs are empty of stores, it may be absolutely necessary to feed. Sometimes it happens, even in June, with plenty of white clover bloom, that bees don't get enough for their daily living. At such times the queen will stop laying, and no honey being in the hive the bees will suck the juices out of the unsealed brood and throw the skins out of the hive. If no stores are in the hive it isn't a bad plan to feed anyhow, for the feed will not be wasted, and it isn't best to wait for actual starvation.



The Barber Plan of Forcing Bees into Sections.—Mrs. A. J. Barber says in Gleanings in Bee-Culture that one reason she puts on a shallow extracting-super before putting on sections is because the queen will lay in these extracting-supers, and then the bees will fill the sections between the two lots of brood, but will not go up thru the sections to lay again in the extracting-combs. The extracting-super being above does not in the least affect the whiteness of the sections.

The Big-Little-Hive Question seems to be one that will not down. Chas. Dadant, replying to G. M. Doolittle in Gleanings in Bee-Culture, urges the difference in swarming as making the large hive superior, saying that in his large hives the home apiary of 80 colonies did not give 10 swarms in three years, while Mr. Doolittle last year alone had 548 swarms from 49 colonies. As a parting shot he quotes Mr. Doolittle as reporting that in 1877 he had a colony in a specially constructed hive with 32 frames which had about 99,500 bees.

One Hive-Story or Two.—For some time Editor Root, of Gleanings in Bee-Culture, has been advocating large colonies, such as could not be contained in an 8-frame hive, but has maintained that if additional room was given by a second story it was just as well as to have more room in a single story. Mr. Dadant does not agree. Challenged by A. N. Draper, Mr. Root has had built a number of hives just like the 10-frame Langstroth in all respects except that the frames are two inches deeper. These are to be given a fair trial in order to help settle the question. Dr. Miller does not want to believe that large frames and hives are better, because the smaller hives are so much nicer to haul

and to handle, but he has fears that the two-story hives with smaller frames are not so good. Mr. Poppleton thinks there is no question that the greater capacity all in one story is much better for extracted honey, altho he doesn't pretend to understand why. Mr. Root says orders are on the increase for 10 and 12 frame Langstroth hives from extracted-honey men of the South, and the 8-frame size is preferred by comb-honey men of the North. Quite a few are ordering what he calls Draper's "barns" to test alongside of the regular 8-frame hives.

Comb versus Extracted Honey.—In a discussion reported in the Canadian Bee Journal, Mr. Holtermann took the ground that the beginner should be discouraged from producing comb honey. He estimated that 70 pounds of comb could be produced to 100 of extracted. Mr. Gemmill thought this might be right some years, and some years wrong. Mr. Davidson thought the amount of comb was placed too high, and Mr. Darling said that not far from him first-class comb honey was sold for 5 cents. No one seemed ready to champion the cause of comb honey.

Queens Reared in Queenless Colonies.—Dr. Miller seems to have in W. W. Somerford an ally to help support his heretical notion that good queens can be reared in a colony from which the queen has been removed. Mr. S. says that such queens have given him entire satisfaction for years, seeming to be just as good as queens reared by the Doolittle plan, except at times just after a honey-flow. At such times he is obliged to do considerable culling in order to get large queens that will mate quickly, and early mating and early laying he considers the best evidence of a good queen.—Gleanings in Bee-Culture.

Inspecting Queens in the Cells.—W. W. Somerford relates in Gleanings in Bee-Culture that when rearing queens in foul-broody apiaries he found it essential to examine the contents of the queen-cells before the time of hatching, otherwise there might be in a cell nothing but a dead larva. He made a cut across the base of the cell with the little blade of a sharp cell-knife, tipt the blade sufficiently to open the cut so he could have a good look at the occupant, then masht the cut nicely together, and with one or two delicate touches of the hot fire-box of a smoker it was welded together to the satisfaction of the bees.

Travel-Stain.—Editor Doolittle, in the Progressive Bee-Keeper, refers to the discussion that has been going on as to the cause of travel-stain, and after referring to the theory that dark bits of wax from the brood-combs are incorporated in the cappings while they are in the process of construction, says:

"While I agree to this part, I also believe there is such a thing as 'travel-stain,' or something of the kind, for I have yet to see a single section of honey which has been left on the hive three weeks after it was finisht that was as spotless snow white as it was on completion; and if left on two months it is discolored to a sufficient extent to throw it into a lower grade when putting up for market. I quite agree in this conclusion, for I have had combs built scores of times between old combs in the brood-chamber when fully one-half of the wax they contained was that taken from the old combs each side of the one being built."

Mr. Doolittle will have no great difficulty in having any comb-honey producer of experience and observation agree with him.

Stimulative Feeding.—Editor Gerstung, of the Deutsche Bienenzucht, sent out a series of questions regarding stimulative feeding. Of 15 replying, 8 thought the harvest might be increast by such feeding, and the other 7 would none of it. The reason for these opposite views is that stimulative feeding is a two-edged sword, a speculation upon the future, sometimes turning out well, and sometimes causing loss. All agreed that as to localities and colonies, the place for such feeding is where early harvests are best, and the colonies to be treated are the strong ones. Eight would feed pure honey, others would add some albuminous substance, as pollen, flour, milk; 2 would feed sugar if honey was yet in the hive, and one would feed sugar unconditionally. Feeding should begin about 6 weeks before the full harvest, and cease about 6 weeks before its close. Feed in small portions often repeated, preferably at nightfall, with great care to prevent robbing. The conclusion was that stimulative feeding was advisable only in the hands of the careful and experienced, being almost sure to bring bitter disappointment to the novice.

BIOGRAPHICAL.

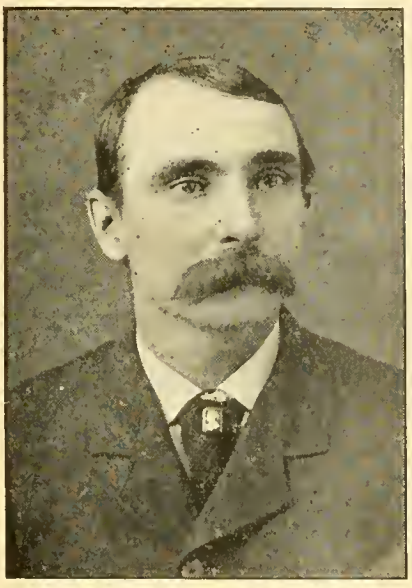
MR. J. W. OGLESBY.

The subject of our sketch this time is Mr. J. W. Oglesby, a bee-keeper living in Logan Co., Ark., whose picture appears herewith, and who gives the following short account of himself:

I was born May 29, 1858, near Knobnoster, Mo., and brought up all over the country. In 1863 my parents moved to Douglas Co., Kan., thence to Nebraska, thence to Holt Co., Mo., thence to St. Clair Co., Mo., all within a period of four years. There we lived until I became of age, and I was married to Miss Virginia Peeden, who died in 1888, leaving me with two children.

In 1889 I was married again, this time to Miss Nannie Poorman, of Milesburgh, Pa., who is still alive and the mother of four prattlers—three girls and one boy.

I have followed nearly all vocations, from the cow-puncher to the merchant (my present vocation), having been farmer, school teacher, book agent, sewing machine agent, insurance agent, "patent right man," and about all the rest of the ways of making a living, but finally I settled down with a small stock of drugs, and for the last few years I have been making some money in drugs coupled with bee-keeping. This latter industry is my chief delight.



In March, 1895, I bought a colony of golden Italian bees, the "A B C of Bee-Culture," and subscribed for the American Bee Journal, and "at it I went." With hard study I managed to conduct my amateur apiary in such a manner that I got about 40 pounds of fine honey the first year and one swarm. The following winter I bought and Italianized some blacks, and have since run up, by artificial swarming, to about 30 colonies—last summer—but I doubled up to 23 colonies in the fall. I sold 4 colonies and lost 4 by robbing this spring; however, the 4 that were robbed were queenless, and there has been no honey-flow whatever here this spring, and I was afraid to go thru to examine for fear of inducing robbing, when the bees concluded to "go thru" themselves, which they did. Well, I can't say that I lost 4, either, as I doubled them over strong colonies that I was sure had queens, and I think I lost only a few bees, so I don't count that much loss, yet my count is 4 colonies less.

My bees are all in fine condition. I have the Adels, and better workers I never saw. I pride myself in keeping my stock pure and my colonies strong. I use the dovetail hive with Hoffman frames, and run for extracted honey, for which I have a ready market here at home for all I produce, at 7½ to 10 cents a pound. I believe in large hives, even having some of mine 3½ stories high. I get more honey, and can control swarming better. Our products for this year were very good.

I hope the old American Bee Journal's shadow may never grow less. J. W. OGLESBY.

Logan Co., Ark.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHED IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

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118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR. SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JULY 6, 1899. NO. 27.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Writing for Publication.—In answer to a correspondent the Editor of Gleanings in Bee-Culture offers this paragraph:

"We use only about one-fourth of the manuscript that is sent in for publication. Perhaps some that we do use is not as good as some we refuse. If so, we err in judgment in our selection. It is seldom that any publication is interesting to every reader, from cover to cover. What will interest one will not another."

A very few of our contributors get terribly "riled up" when we fail to publish their pen productions. We print a good deal more than a fourth of the manuscript we receive. Of course, it is an editor's duty to select the contents of his paper, and he often errs in judgment, as Editor Root says, for he is quite human, just like the rest of imperfect humanity.

But, take it all in all, the correspondents of our bee-papers are a pretty nice lot of people. So are those who don't write, but prefer to keep their information to themselves. But it seems that more than ever before the bulk of the contents of the bee-papers of to-day is contributed by only a few writers, and those the old and thoroly experienced. It is far different in this regard from what it was 10 to 15 years ago.

Fashions in Bee-Keeping seem to be almost as evident and changing as in patterns and styles of ladies' dresses and hats. Editor Hutchinson, of the Bee-Keepers' Review, seems to have had his attention called to this subject, doubtless on account of having several charming young ladies in his family (in fact, his children are all of the feminine persuasion). Here is his comment:

Fashions seem to change in bee-keeping in something the way they do in clothing. Last year the girls' shirt-waists were plaid. It makes no difference now whether the plaid waists are worn out or not, they must be laid aside for striped ones. Years ago the plain Langstroth frames were good enough. Then they must have metal corners. The corners proved a nuisance, and were laid aside. Next came the Hoffman style of frame. Now some of the folks are talking of making frames and hives two inches deeper. Then there are the changes in supers, separators, sections, smokers, etc. So it goes on until sometimes it seems as tho changes were made in these things simply to have something new to sell, and so that we bee-journal fellows can have something to talk about. Perhaps I am too severe—but then, I am taking my share of it.

In all seriousness, I suppose new things must be tried; but don't throw away the old for the new just because the new is *new*.

But Editor Hutchinson ought not to be too hard on the folks that are getting up new things. He mustn't forget that *he* started a *new* bee-paper some years ago, and very few bee-keepers, comparatively, have ever had the daring to do that, and expect all other bee-keepers to change from the old and long establisht papers to the new one.

Of course, all new things in the line of bee-fixtures do not prove of particular value, but from out the many suggestions and inventions there ofttimes comes something that is truly wonderful as well as eminently useful. We say, try some of the new, but don't throw away the old until satisfied that the new is really an improvement, and is well worth replacing the old.

England's Honey Supply.—Mr. Benj. G. Irving, of New York, some time ago sent us the following interesting clipping, which originally appeared in the Westminister Gazette:

English bees are unable to produce as much honey as England needs. Every year we have to import 2,250,000 pounds, of which the declared value is 31,000 pounds sterling, or about 3¼d. per pound. Among the countries engaged in supplying our markets with this product, the principal are the United States, Chili and Peru, the other contributors including the British West Indies, France, Australasia, Canada, Germany, Italy, and the Spanish West Indies. No statistics of the quantity of honey produced in the United Kingdom are obtainable, but it is quite evident that bee-keeping is capable of being much more profitably developt than it is.

A Hint for Our Advertisers.—It isn't often that we get anything that we can publish especially for our advertisers, but here is a letter that we think some of them may profit by:

DUBUQUE COUNTY, IOWA, June 26, 1899.

EDITOR YORK:—I am a beginner in bee-keeping. I take the American Bee Journal, and enjoy reading it very much, so you can count me a steady subscriber.

I read all the advertisements, and I see there are a great many who sell bee-keepers' supplies, and can fill orders on very short notice; and I believe they can, because I sent a $12 order for bee-supplies to Ohio; I received the goods six weeks afterward.

Then I sent an order to Des Moines, Iowa, June 6, for $2.00 worth of supplies; they haven't come yet, but I guess they will pretty soon.

Last winter I sent a postal card to one of the large manufacturers of bee-supplies (who advertise in the Bee Journal) for a catalog and price-list; they wrote me they were just out of catalogs and price-lists, but they were going to have some printed, and would send me one. It has not come yet, but I guess it will.

I wrote to another big firm for their catalog; they have not sent any; guess they are out, too.

How long do you think it would take to get bee-supplies from Chicago to Dubuque, Iowa? I may need a great many next year. I know how long it takes to get anything else, as I have a great deal of stuff to come and go by freight and express. SUBSCRIBER.

We think that we need only answer the question in the last paragraph above. If the bee-supply dealer in Chicago has the desired goods in stock, it ought not to take much longer for an order for bee-supplies to be filled from Chicago than for any other kind of goods. But sometimes it happens that dealers or branch offices run out of stock, and have then to wait until a new supply comes from the factory. This may cause delay in some cases.

But, ordinarily, we think our advertisers mean to be prompt in caring for their business. Still, this season we have had the most complaint against certain queen-breeders. It seems that at least one of them not only did not send queens, but was terribly slow in returning money. Now, it seems to us that if queens cannot be sent promptly when ordered, the customer should be notified, and if he cannot wait, then return his money so he can order elsewhere. It is very annoying, and may cause loss of colonies, when queens are not received when expected. Queen-breeders cannot be too careful to be prompt at all times. A prompt, straight-dealing advertiser may not be a "thing of beauty," but he may be "a joy forever"—or at least so long as he advertises and does business.

Some Honey in 1899—Diseased Brood.—Prof. A. J. Cook, of Los Angeles Co., Calif., writing us June 20, had this to say in regard to these two subjects:

I find as I go out for flowers nearly every day the bees are very actively at work on the white sage—Ramona polystachia. The bee-keepers along the hills are all sending very fine comb honey to our grocery stores, which readily sells at 12½ cents a pound, and this, too, altho the sections are far from being well filled. I should have said per section instead of per pound, as all sections sell for 12½ cents, no matter how light; this is what the groceryman pays, and not what he sells for. We see, then, that what I suggested at the beginning of the season has proved true. Tho we have less rain than last year, it came at such favorable times that we shall yet get something of a honey crop.

I still am receiving many samples of diseased brood from bee-keepers, not only in California, but from those in Arizona. With the specimen often comes the information that there is plenty of honey in the hives, and that there could not possibly be any starvation among the bees. This is certainly a very important matter. This disease is entirely different from foul brood. It certainly seems as if the bees die from some cause not understood, and then decay by natural processes sets in. The important question to determine is what makes the brood die. In all cases which I have examined about here, there seems to be none of this trouble, altho in 1894 I saw not a little of it among the bees here. If the malady is the same that was so prevalent then, we may certainly hope and believe that it will not be of long duration. I quite believe that it was a benefit to me in that year, as it thinned out the bees when numbers were of no account, and so it was necessary to feed less. I had to feed my bees to save them, and as soon as I commenced to feed the disease disappeared. A. J. COOK.

Bees Averse to Dark Color.—We have just learned that there is a large bee-keeper in Quincy, Ill., who is also an extensive poultryman. He has given up the raising of black and dark-colored chickens because the bees sting them so. He will raise the white and lighter-colored varieties hereafter. Who was it that said all colors look alike to bees, and that they would not sting dark objects any more than light ones?

The Premiums offered on page 426 are well worth working for. Look at them.

MR. J. M. HAMBAUGH, of San Diego Co., Calif., wrote us June 20:

"We will have one-fourth crop of honey in some localities in this county; in other localities bees are starving."

* * * * *

MR. HENRY ALLEY, of Essex Co., Mass., wrote us June 24:

"We have had plenty of rain lately, but the white clover was ruined before the rain came. Bees are idle."

* * * * *

MR. J. T. HAIRSTON, of Cherokee Nation, Ind. Te-., writing us June 22, said:

"My bees are doing nicely. I have 122 colonies fro n two four years ago. I prize the 'Old Reliable' highly."

* * * * *

MR. S. A. NIVER, of Tompkins Co., N. Y., made a two-days' visit recently to The A. I. Root Co. Mr. Niver is a brother-in-law of the late Miles Morton, of the same State. He (Mr. N.) has a well-earned reputation for being one of the best honey salesmen known. We have met him, and—"he's—all—right."

* * * * *

MATE WILLIAMS, of Wadena Co., Minn., writing us June 20, reported:

"It has rained nearly every day or night so far this month. The raspberries are in bloom again. Last year I sent raspberry extracted honey to Omaha, and it was awarded a silver medal and a diploma, of which I am very proud."

* * * * *

MR. J. H. MARTIN (Rambler) has this paragraph in Gleanings in Bee-Culture for June 15, about orange-blossom and sage honey:

"Several tons of honey have been harvested near Riverside, where the bees had access to the orange-orchards. The orange-blossoms yielded a good amount of nectar this year. A limited amount of sage honey is coming into the Los Angeles market, showing that there are a few favored locations. There will be hardly enough, I think, for home consumption."

* * * * *

DR. A. B. MASON, of Toledo, Ohio, Secretary of the United States Bee-Keepers' Association, wrote us June 26:

"For the last two days the bees have been getting a little surplus—the first this season. Basswood and white clover yield none, but sweet clover is giving the bees a little to do—not much."

Next week we will be able to make some announcement as to the railroad rates, etc., for the Philadelphia convention in September. Look out for them.

* * * * *

MR. D. W. HEISE is outrageously slandered in the June Canadian Bee Journal. A correspondent, referring to his humor, quietly asks: "Is Heise not a German?" In reply, Editor Holtermann makes this public accusation:

"Yes, Heise is certainly a German. I do not know if he ever waylaid an Irishman and stole his wit, or how he acquired it, but we may rest assured he never came by it honestly."

Now, being somewhat German ourselves, we feel like helping Mr. Heise. The idea of a German having to steal wit of an Irishman in order to possess any! We wonder where Editor Holtermann has been all his life! We hope the next time they meet, Mr. Heise will show Mr. Holtermann the difference between German and Irish wit. If the meeting-place shall be in Philadelphia, about Sept. 5, 6 and 7, we will try to be on hand to help Mr. Heise, in case he needs any assistance when he attempts to put a Dutch "Holter" on that "Irish" "mann" of the Canadian Bee Journal!

Why Not Just Double

The List of Subscribers to the Old American Bee Journal?

We really believe that if **ALL** the present readers of the American Bee Journal were so inclined, they could help to double its regular list of subscribers before August 1, 1899—or during the next 5 or 6 weeks. We do not find any fault with what our subscribers have done in the past toward increasing the list of Bee Journal readers—for they have done nobly—but why couldn't the doubling of the list be accomplisht within the next month? We surely think it could be done, and in order that it may be easier for those who help in it, we will make a **SPECIAL NEW SUBSCRIPTION OFFER**, and also pay all who will aid in securing new subscribers. Here is the offer:

Six Months for 40 Cents to a New Subscriber....

Yes, we will send the American Bee Journal **EVERY WEEK** from July 1, 1899, to Jan. 1, 1900—26 numbers for only 40 cents, to a **NEW** subscriber. In addition to this we will send to the present regular subscribers, for the work of getting new 6-months' readers, their choice of the premiums mentioned below, but no premium will also be given to any new subscriber on these offers, under any circumstance:

For Sending 1 New 40-cent Subscriber ——Your choice of one of the following list:

Poultry for Market.
Our Poultry Doctor.
Capons and Caponizing.
Foul Brood—Kohnke and Cheshire.
10 copies York's Honey Almanac.

For Sending 2 New 40-cent Subscribers ——Your choice of one of the following list:

Dr. Howard on Foul Brood.
Monette Queen-Clipping Device.
Bienen-Kultur (German) by T. G. Newman.
Dr. Tinker's Bee-Keeping for Profit.
Pierce's Winter Problem in Bee-Keeping.
Bees and Honey (160 pages, paper) by Newman.
20 copies York's Honey Almanac.

For Sending 3 New 40-cent Subscribers ——Your choice of one of the following list:

Bees and Honey (160 pages, cloth) by Newman.
Bee-Keeping for Beginners, by Dr. J. P. H. Brown.
Bienenzucht und Honiggewinnung (German) by J. F. Eggers.
Advanced Bee-Culture, by W. Z. Hutchinson.
30 copies York's Honey Almanac.

For Sending 5 New 40-cent Subscribers ——Doolittle's Scientific Queen-Rearing.

For Sending 6 New 40-cent Subscribers ——Prof. Cook's Bee-Keeper's Guide.

NOW FOR A GRAND PUSH FOR NEW SUBSCRIBERS!

It seems to us that with the above low rate to new subscribers, and also the premiums offered, we should get such a landslide of new subscriptions as will make us sweat to care for them during the next few weeks without any help from the hot weather. **WE** are ready now to enter the new names and mail the premiums. Are **YOU** ready to go out and get them, and then send them in?

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

The Midland Farmer

(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,

Wainwright Building, ST. LOUIS, MO.

7Dtf Please mention the Bee Journal.

Headquarters FOR THE Albino Bee!

THE BEST IN THE WORLD.

If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the ALBINO. I can furnish the Italians, but orders stand, as heretofore, 50 to 1 in favor of the ALBINO. I manufacture and furnish **SUPPLIES.**

S. VALENTINE, Hagerstown, Md.

In the multitude of counsellors there is safety.—Prov. 11-14.

Starters and Drone-Comb in Sections

Query 95.—If starters are used in sections large enough to about half fill them, will the bees be likely to fill out the remainder of the section with drone-comb? My only reason for using starters this large is on account of so much drone-comb.—CLINTON.

P. H. Elwood—Yes.

J. M. Hambaugh—Yes.

E. Whiteomb—Not so likely.

G. M. Doolittle—Yes, they do for me.

Mrs. A. J. Barber—If the colony is in proper condition it will make no difference.

A RARE CHANCE

to purchase an apiary of 200 colonies of Italian and Carniolan Bees in 10-frame Langstroth and Dovetailed hives. The hives are two-story with 10 brood and 8 extracting-frames in top story, all wired for extracting. Combs are straight and in fine condition; last year's crop of honey was over 700 gallons from 150 colonies.

Purchaser can occupy the present good and convenient location of two acres, well shaded, with a comfortable residence for a family, for $10.00 per month, within 100 yards of fast line of electric cars that go thru main part of New Orleans every 5 minutes. Mail service twice a day. Poultry-houses and yards at cost of wire-netting in fences, and some fine poultry for sale; also furniture in house.

All must be sold, and location abandoned on account of poor health. All honey, poultry and eggs can be sold in city home market at good prices. Correspondence solicited.

J. W. WINDER,

27A2(Halfway House, New Orleans, La.

Please mention Bee Journal when writing.

Queens Untested Italian, 50c each; Tested, $1.00 each. Queens large, yellow, and prolific. Address,

E. W. HAAG, Canton, Ohio,

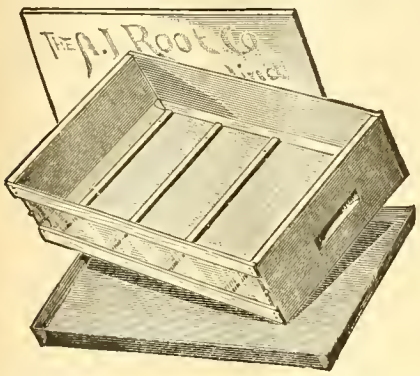
8Atf (Successor to THEODORE BENDER.

Root's Column

HONEY=PACKAGES.

If you have a crop of honey you will want packages in which to put it on the market. For comb honey you will be interested in our

No-drip Shipping=Cases



which we are prepared to furnish in various styles and sizes as listed in our catalog. They are packt in lots of 50 in carrying-crates suitable for shipping your honey in after it is put in cases.

For extracted honey you will want, for storing and shipping to market,

FIVE-GALLON Square Cans

two in a case. We provided ourselves with two carloads of these before the advance in tin-plate, so that, while they last, we can still sell at the old price, **10 boxes, $6.00.**

□For putting up honey for retail we have a variety of packages in tin and glass, listed in our catalog. Of most of these we are also provided with a large stock.

Ball's Best Mason Jars,

with Aluminum Caps.

We have a carload of these which we offer for July shipment at the following special prices, put up one dozen in a box:

	PER DOZ.	SIX DOZ.	GROSS
Pint Mason Jars	45c	$2.50	$4.75
Quart Mason Jars	48c	2.75	5.00
2-quart Mason Jars	60c	3.40	6.50

No. 25 Glass Jars.

□This is a very popular Jar for one pound of honey. It has porcelain top with rubber ring and tin screw band. We have them put up one gross in a barrel at $5.50; or two dozen in a partitioned case, ready for reshipping when filled with honey, at $1.15 per box, or $6.50 for six boxes.

Tin=top Tumblers.

We have two sizes of these, $\frac{1}{3}$ pint, or 10 oz., No. 788, packt 21 doz. (252) in a barrel, at $5.00 per barrel; or $\frac{1}{3}$ quart, 16 oz., No. 789, packt $16\frac{2}{3}$ doz. (200) in a barrel, at $5.00 per barrel. 200 of each size nested in a barrel for $8.70.

THE A. I. ROOT CO.
MEDINA, OHIO.

We use one-inch starters, and have no trouble with drone-comb.

□S. T. Pettit—With exceptional cases, yes.

J. A. Green—Yes, they will very often do so.

Dr. C. C. Miller—Yes, to a considerable extent.

E. S. Lovesy—My experience is, as a rule they do not.

D. W. Heise—I will let the comb-honey producers answer this.

J. A. Stone—I don't know, as I have never tried it.

Mrs. J. M. Null—Yes. It is more profitble to use full-size starters.

E. France—It would be a mere guess with me, as I do not produce comb honey.

O. O. Poppleton—I have too little experience in producing section honey to answer.

A. F. Brown—A great many times they will. I would use full sheets or only a small starter.

Emerson T. Abbott—They may and they may not. That will depend upon circumstances.

R. C. Aikin—Yes, likely, particularly if none below, colony very strong, old queen or queen-cells.

Mrs. L. Harrison—What are your objections to drone-comb? I would rather eat it than foundation.

C. H. Dibbern—They will be inclined to do so, but I should certainly use full sheets of foundation, or starters only.

Eugene Secor—They will sometimes, I think. Why not use full sheets in sections, and thus insure all worker-comb?

Prof. A. J. Cook—I think they will almost surely do so. Use full sheets unless you are willing to have drone-comb. Why not have it?

R. L. Taylor—Except in colonies having queens of the current year's production such comb would mostly be of the drone size.

Chas. Dadant & Son—They will change to drone-comb as readily if you give them a half sheet as if you give them only a narrow strip.

Rev. M. Mahin—Sometimes they will, and sometimes not. They will build less drone-comb with large starters than with small ones, or with none.

W. G. Larrabee—I always use full sheets, and have never used but a few starters; but I think they are very liable to fill out the section with drone-comb.

J. E. Pond—From my own experience I should say they would. My bees are very apt to use drone-cells for surplus storage. The reason, I think, is obvious.

C. Davenport—If there were none, or but very little, drone-comb below, and the colony had any intention of swarming, they would be apt to fill out many of them with drone-comb.

Dr. J. P. H. Brown—I have had cases where the bees would put drone-comb in the remainder. Hence, to guard against this, I fill the section with foundation to one half inch of the bottom.

Adrian Getaz—When I use small starters, the first three or four rows of cells are of normal size, then they gradually increase, and finally the drone size is reacht somewhere about two-thirds of the depth of the section, and thence continued down to the bottom.

G. W. Demaree—Why should you object to drone comb in *sections?* When storing comb honey bees can make better headway when building "store comb"—or drone-comb—as we commonly call it. In answering your question directly, the bees will sometimes fill out with drone-cells and sometimes with worker-cells.

Texas.—The Central Texas Bee-Keepers' Association will meet at Milano, Tex., July 20 and 21, 1899. All are cordially invited to attend.

H. H. HYDE, Asst. Sec. and Treas.
Hutto, Texas.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

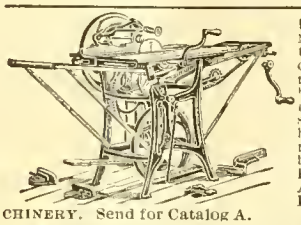
Your orders are solicited.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

Northern Queens.

IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queens, $3.00 each; the same with untested Queens, $2.25. Correspondence solicited.

MATE WILLIAMS,
26A4t NIMROD, Wadena County, MINN.
Please mention Bee Journal when writing.



UNION COMBINATION SAW—tor ripping, cross-cutting, tuitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.
Please mention Bee Journal when writing.

ADEL BEES

Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

HENRY ALLEY,
24Atf WENHAM, ESSEX CO., MASS.
Please mention Bee Journal when writing.

ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Warranted Queens, $1.00: Untested, 75 cents.

9A26t **J. D. GIVENS, LISBON, TEX.**
Please mention Bee Journal when writing.

EGGS

FROM BARRED PLYMOUTH ROCKS

Thorobred — Fine Plumaged Fowls—Farm Raised—75 cents per dozen.

MRS. L C. AXTELL,
11Atf **ROSEVILLE, ILL.**

Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT FAIL

Before placing your order, to send me a list of what you need in

Foundation, Sections,

And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.
Please mention Bee Journal when writing.

THE G. B. LEWIS CO'S

BEE-HIVES AND SECTIONS

Are Models of Perfection.

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This is the Verdict of Thousands of Customers and the Acknowledgment of Competitors.

Our unrivaled facilities, coupled with twenty-five years of manufacturing experience, enable us to anticipate and supply every want and need of the bee-keeper, promptly and accurately.

YOU WANT THE BEST—They Cost No More.

A copy of our Catalog and Price List mailed free upon application.

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FRED FOULGER & SONS, Ogden, Utah.
SMITH'S CASH STORE, San Francisco, Cal.

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or, will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

PACIFIC RURAL PRESS,
330 Market Street, - SAN FRANCISCO, CAL.

Golden Italian Queens Warranted purely mated; all Queens by return mail; will run 1,200 nuclei; Queens reared by Doolittle's method; safe delivery and satisfaction guaranteed; have 11 years' experience and know what good Queens are.

Queens, 50c each, 6 for $2.75.

300 SELECTED Queens, nice **LARGE** and **YELLOW** all over, at 75c each; 6 for $4.00.

My Queens are prolific and workers, industrious as well as beautiful to look at; hundreds of testimonials prove this. I just now have a nice lot of Queens which have just started to lay.

SPECIAL LOW PRICE on Queens in quantities. Address,

H. G. QUIRIN, Parkertown, Erie Co. Ohio.
Money Order Office, BELLEVUE.

22A21t Please mention the Bee Journal.

GENERAL ITEMS

The Army in the Drum.

A soldier sought the battlefield
Where first in coat of blue
He past before the Angel Death
In swift and stern review.
The broken swords were sheathed in mold,
The rusty cannon dumb:
But in the tangled grass he found
An army in a drum.

The sticks were gone that rattled once
Tattoo and reveille,
The shell that took the drummer's life
Had burst the head in three.
But from the shattered sheepskin rose
A low, continuous hum,
The murmur of the rank and file—
The army in the drum.

For there the bees had built a home
And stored the sweets away,
From blossoms born of soldier blood,
The mingled blue and gray.
Where once the morning sky beheld
The charging columns come,
They pitcht in peace their waxen tents—
The army in the drum! —Criterion.

Trying to Keep Down Increase.

I have 47 colonies of bees. White clover has been abundant for two weeks, but it didn't secrete nectar until the last 5 or 6 days. I fenced in a square lot with barbed wire this spring, out in open ground, and moved my bees to it—about 100 yards. I never lost any by their going back to the old yard, but all in the center of the new yard are weak and haven't started work in

Better than Ever

Am I prepared to furnish everything needed by the up-to-date bee-keeper, all goods manufactured by THE A. I. ROOT CO., shipt to me in car lots, and sold at their prices. Send for illustrated, 36-page Catalog FREE.

Address, **GEO. E. HILTON,**
17A17t FREMONT, Newaygo Co., MICH.

PAGE

WE DO CLAIM

that **Page Fence** contains better wire than its competitors: The **Page** requires it, the others couldn't safely use it. Ask us why.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

WHEN YOU WANT ..QUEENS.. Send us your order. We will fill it by RETURN MAIL, with the best of Italians, large yellow Queens, healthy and prolific, workers gentle and the best of honey-gatherers. Tested Queens, $1.00 each; Untested, 75c; $8.00 per dozen. Send for our price-list, and see what others say.

J. W. K. SHAW & CO.,
LOREAUVILLE (Iberia Parish) LOUISIANA
22A6t Please mention the Bee Journal.

THE AMERICAN

Institute of Phrenology,

Pres. MRS. CHARLOTTE FOWLER WELLS, incorporated in 1866, opens its next session on Sept. 5, 1899. For prospectus send (free on application) to the Secretary, care of

FOWLER & WELLS CO.
27 East 21st St., NEW YORK.

27A6t Please mention the Bee Journal.

the supers, while all around the outside they are well along in one and two supers, and swarming. The hives are 8 feet apart in all directions. Is it possible that the young bees get lost when playing out from the center hives, and go to the outside ones? I would like Dr. Miller's opinion on this.

I am trying a (to me) new plan to keep down increase, and get a big yield of honey. I keep all queens clipt, and when a swarm issues I cage the queen, take two supers of sections, place them on a loose bottom-board, remove the old hive, set the prepared supers in its place, take the partly-filled super off of the old hive, put it on the other supers on the old stand, take one section out of it, set the caged queen in its place, put a cover on, let the swarm return and go into the sections, let them remain that way 24 hours or longer, then go thru the old hive, cut out all queen cells and cups, take the caged queen out, replace the section, remove the swarm and super, put the old hive back on the old stand, set the 3 supers with the swarm in them on top, let the queen run into the old hive, and the work is done. It is working finely so far. I will report results later on.

RUFUS WILLIAMS.

Lawrence Co., Ind., June 7.

All Lovely in Kansas.

We are having a good honey-flow from alfalfa. Bees have doubled, and are now in supers. All is lovely in Kansas.

S. HARTER.

McPherson Co., Kan., June 23.

Love the Farm and Farm Home.

"The only drawback to any intelligent country community enjoying educational and refining privileges is lack of co-operation between the farmers themselves," writes Mrs. John B. Sims, of "Entertaining in the Country," in the July Ladies' Home Journal. "Whenever a farming community realize that in themselves lie the means of educating their sons and daughters to love the farm and the farm home, and that because one does not have the privileges of the town or large city there is no reason why he should stagnate either mentally or socially, they will have solved the problem of how to live happily and contentedly on a farm."

No Nectar in Basswood Bloom.

Basswood bloom, and almost no honey in it. Fine days last week, and the apiary was quiet—allee same like graveyard.

Lucas Co., O., June 26. E. E. HASTY.

Very Discouraging Spring.

I think my bees are a little stronger than last year at this time, altho I don't remember such a discouraging spring since I came to Iowa, which was in 1871. It has been cold and rainy or so windy that the minute a bee got outside the hive to fly she was dasht to the ground.

The last winter and spring have been hard on fruit-growers in this section of country. I had one acre of strawberries winter-kill; I never had as strong, healthy plants, and I put four tons of wild hay on them for covering. Also, I had 40 cherry-trees winter-kill, some of them quite large, having been set out seven years. They were all of one kind except two, which were early Richmond grafted trees; the others were a black cherry, and were not a grafted tree. My English Morello, Montmorency, and others, came thru all right and bloomed full, but on account of rain, wind and hail, there is not much fruit set. We had hail four nights in succession.

I have a half acre of raspberries, and the bees work on them a good deal, but I have never seen a bee on my strawberry patch, altho I see such statements sometimes made in different papers. I have observed closely to see what the bees like, for I love to watch them and fuss with them, altho I can't eat honey at all. I find they work on plums,

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Bingham & Hetherington Uncapping-Knife.

PRICES OF

Bingham Perfect Bee-Smokers

AND HONEY-KNIVES.

Smoke Engine (largest smoker made)	4-in. stove.	Doz. $13.00;	each,	by mail, $1.50
Doctor	3½ in. stove.	Doz. 9.00;	"	1.10
Conqueror	3-in. stove.	Doz. 6.50;	"	1.00
Large	2½-in. stove.	Doz. 5.00;	"	.90
Plain	2-in. stove.	Doz. 4.75;	"	.70
Little Wonder (weight 10 ounces)	2-in. stove.	Doz. 4.50;	"	.60
Honey-Knife		Doz. 6.00;	"	.80

Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in **America.** We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. **INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.**

Please mention Bee Journal when writing.

OUR MOTTO: WELL MANUFACTURED STOCK — QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

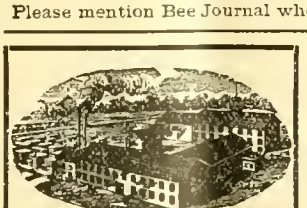
We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention Bee Journal when writing. **MARSHFIELD, WISCONSIN.**



BEE-SUPPLIES!

We have the best equipt factory in the West. Capacity, one carload a day; and carry the largest stock and greatest variety of everything needed in the apiary, assuring BEST goods at the LOWEST prices, and prompt shipment.

Illustrated Catalog, 72 pages, Free.

We also manufacture Tanks of either wood or galvanized steel, all sizes, any form, for all purposes. Price list free.

Address, **E. KRETCHMER, RED OAK, IOWA.**

20A13t Please mention Bee Journal when writing.

Please Mention the Bee Journal when writing Advertisers.

...Italian Queens

—AND—

Comb Foundation.

I have been rearing queens for 26 seasons on the best known plans, and have some choice ones as follows:

1 untested Queen	$ .75
6 untested Queens	3.50
12 untested Queens	6.00
1 tested Queen	1.00
6 tested Queens	5.00
1 selected tested Queen	1.50

COMB FOUNDATION made from PURE WAX. Send for prices. J. L. STRONG,
26A4t CLARINDA, Page County, IOWA.

Please mention Bee Journal when writing.

FREE FOR A MONTH....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

Please mention Bee Journal when writing.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

Please mention Bee Journal when writing.

ITALIAN QUEENS.

Untested, 65 cents each; Tested, $1.00. Have had 32 years' experience with bees; am running 800 Nuclei, and rearing only 5-banders. I have no 3-banded queens, and no 3-banded drones.

Can send Queens by RETURN MAIL.

Dan'l Wurth, Falmouth, Rush Co. Ind.
27A3t Please mention the Bee Journal.

IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

BEE-SUPPLIES.

Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor—in fact everything used by bee-keepers. Send for our Catalog.

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Western German Bank — The Brighton German Bank Co. both of Cincinnati, O.

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gooseberries, currants, cherries, apple, raspberries, lilac, and a great many other plants, but I have never seen one bee working on strawberries.

The basswood is in bud here; I am watching to see when it opens. I shall put my supers on just before it opens, if I can. There is plenty of basswood within a range of a mile or so of me. LEWIS LAMKIN.

Woodbury Co., Iowa, June 3.

Rather Severe Winter Losses.

Winter losses of bees in this vicinity were rather severe, some losing nearly all. We wintered five colonies on the summer stands, four in box-hives, and one in a dovetailed hive. All came out strong this spring, and built up nicely on box-elder, maple and fruit-bloom. We transferred one colony during fruit-bloom, but will wait until three weeks after swarming to transfer the remainder. We have now nine nice colonies, but they are hardly making a living at present, as clover is a failure in this section, and, should basswood be also, the surplus honey will be rather scarce, I am afraid.

My wife attends to the bees with what help I can give her at odd times, as I am busy on the farm. She has 15 dovetailed hives painted, and filled with full sheets of foundation, and supers painted and some filled with sections and starters. Better to be ready a little too soon than a little late. We use the Ideal sections with fences.

We intend having some winter-cases made to order that can be taken apart to pack away in summer. The past spring we put up a building in which to store apiary fixtures, and do the work pertaining thereto. It is 12x20 feet and 6½ feet high.

Do any of the readers of the American Bee Journal know by experience whether or not alfalfa would be a success in this (Jefferson) county as bee-pasturage? If so, what kind of land does it require?

We get many valuable hints from the American Bee Journal, and would not like to be without it.

The kingbirds are very plentiful around the apiary and vicinity, and destroy many bees. My father-in-law and myself treat them to powder and shot very frequently, and my wife also brings down a few.

A. E. MARLOW.

Jefferson Co., N. Y., June 13.

Iced Water Preferable to Ice Water.

Iced water is preferable to ice water—iced water being cooled by the ice without being brought in direct contact with it. The less ice water one drinks the better. Ice water increases one's thirst—that is, there is a greater tendency to desire drink inasmuch as ice water slakes the thirst for a moment but does not quench it.—July Ladies' Home Journal.

Bee-Keeping in Mississippi.

Not seeing anything in the American Bee Journal from this section of the State, I conclude that an occasional item might not be anything out of the way. One would think from not noticing anything from our part of the country that there were no bees here at all, but a greater mistake was never made than to draw that conclusion. A great many farmers own a small number of colonies all over our broad country, and consider they pay them very well. There are not a few apiaries on the small order all about, but some quite extensive in some localities, especially in the Mississippi Delta country.

Here in north Mississippi our honey-flows begin in April, usually, and last alternately till frost, tho with intervals sometimes of nearly a month. Our finest flow comes usually from May 3 to the 8th, on time promptly every year, with the bloomiug of the holly-trees, which lasts only a very few days, say 3 to 10 days at best, but during which time you never saw the like, I think. Such a roaring and busy state of affairs in the bee-yard is not witnest, except in this very particular time. Honey can be ex-

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

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We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

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tracted out in the yard and bees would not start robbing; this shows what it is. Some of your Northern folks may regard this with a little credulity, but if they doubt it and will come down next May, about the 3rd or 4th, they can see it verified. Yet this state of affairs lasts only till it rains, which it always does while these holly-trees are in full bloom.

We run an apiary here of 60 odd colonies, located just a mile from a large creek-bottom where these holly-trees grow; also some poplar, which yields some pretty fair honey. We have had a very light honey-flow now since holly went out of bloom, but enough has been gathered to help finish up wonderfully in sealing over the combs, etc. There are thousands of elder-bushes all over this country now in bloom, have been, and will be for some time yet, which yield nice, clear honey, and add considerably to the crop of honey.

A little later we will have peas in bloom, which yields considerable honey. The bees fairly swarm upon the blossoms. After that the summer and fall weeds and wild flowers come, which help some. Thus you see we are not without a honey-flow all along thru the summer, tho these are very light generally as compared with our spring flow. Quite a number of bee-keepers in our State produce honey by the tons. Tho we have no State bee-association, as some of the Northern States, yet in its quiet way our part of the country gathers quite a large quantity of the sweet that Dame Nature intended we should use; still there are millions of pounds of the finest honey the world ever saw wasted away every year, right here in our own State, just for the want of bees to gather it. But before locating down here, a study and examination as to locality are very necessary, as some places are no good at all for a large lot of bees, while plenty of places are good.

De Soto Co., Miss., June 2. W. T. LEWIS.

Hustlers Italian Queens from Imported stock. Untested, 65 cts. each.

24A4t T. N. BRIGGS, MARION, MASS.

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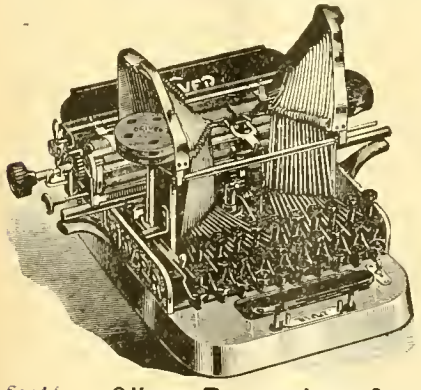

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, June 19.—Not any comb honey on the market except buckwheat and other dark grades. We look for new crop to start in at about 13c for best grades of white; light ambers and off white 10@12c. Extracted selling at 5@7c for ambers, and 6@8c for white, according to quality, color and package. Beeswax steady at 26@27c. R. A. BURNETT & Co.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, June 14.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Market is firm, with very little now offering, either new or old. This year's crop of California honey is light, and there is nothing to warrant anticipating low prices the current season.

KANSAS CITY, June 22.—New white No. 1 comb 15c; No. 1 amber, 14c. New white extracted, 6c; amber, 5½c; dark, 4½@5c. Beeswax, 20@22c.

C. C. CLEMONS & Co.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

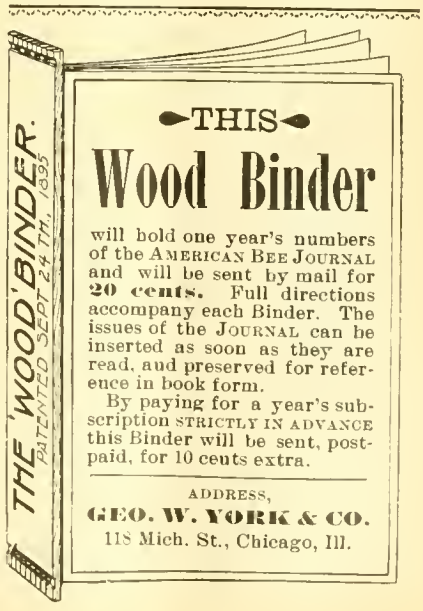
BATTERSON & Co.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it. PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.

M. H. HUNT.



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has concluded to sell QUEENS in their season during 1899, at the following prices:

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Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.
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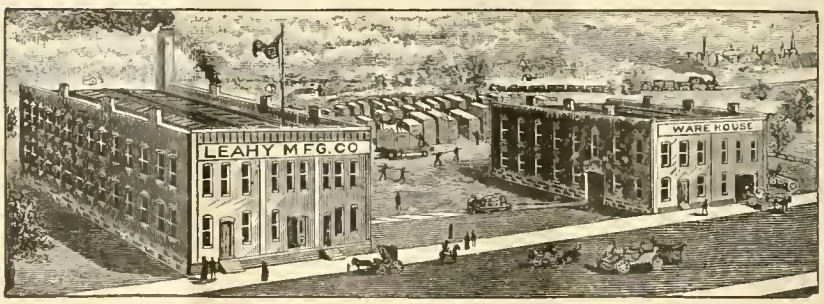

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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JULY 13, 1899. No. 28.

CONTRIBUTED ARTICLES

Introducing Queens—A Certain and Practical Method.

BY W. Z. HUTCHINSON.

TO introduce a queen to a colony of bees, two things must be well considered—the condition of the bees, and the condition of the queen. The condition and behavior of the queen are very important. If the queen will only walk about upon the combs in a quiet and *queenly* manner, and go on with her egg-laying, she is almost certain to be accepted if the other conditions are favorable. Let her run and "squeal," and utter that peculiar "zeep, zeep, zeep," and the bees immediately start in pursuit.

To introduce a queen from one colony to another in the same apiary does not call for the skill needed when a queen has been absent several days from a colony, and is jaded by a long journey. I have frequently taken a queen from a colony, and caged her to send away, and then immediately taken a laying queen from a nucleus and placed her upon the spot upon the comb whence I had removed the other queen, and had the satisfaction of soon seeing her surrounded by a circle of admiring retainers. I believe that there are times, particularly when honey is coming freely, when a colony with a laying queen would accept *another* fresh laying queen, simply by having her placed upon the combs; and all would go well until the queens came in contact.

So far as the queen is concerned, it is important that she be brought before the bees in a natural manner, in such a place and way as they would expect to find her. When queens have come from a distance they are more difficult to introduce. For the purpose of introducing such queens, the old Peet cage was excellent. It was a poor shipping-cage, but, as an introducing-cage, that could also be used as a mailing-cage, it has had no superior. As an introducing-cage it did have *one* objection, and that was that the bees might liberate the queen too soon; that is, before they would accept her. It is possible, however, to use such a cage that this objection may be overcome, but the cage cannot be used for a mailing-cage. This is another illustration of the fact that these combination tools are seldom so satisfactory as special tools.

The style of cage, and the method of using it, that I am about to describe, are not new. I think that Mr. Doolittle has used and described this cage. Mr. F. Greiner, of New York, also described it in Gleanings in Bee-Culture for Oct. 1, 1898; and I have to thank that periodical for the use of the cuts that appear in this article.

The cage is made as follows: From a piece of ordinary wirecloth, 6x8 inches square, a piece 1¼ inches square is cut from each corner. Each side and end is then raveled out to the depth of ⅝ of an inch. The result will be a piece of wirecloth looking something like Fig. 2. The sides and ends are bent up at right angles, making a tray-like cage 1¼ inches deep, 3½ inches wide, and 5½ long, looking something like Fig. 3.

To use this cage in introducing a queen proceed as follows: First remove the old queen from the colony to which the new comer is to be introduced, then look over the combs until one is found upon which the bees are gnawing out in considerable numbers. Shake and brush the bees from this comb. If the circumstances are such that the comb can now be carried into some room, so much the better, as it prevents any possible loss of the queen by taking wing. If she is clipt, of course this precaution is unnecessary. Place the open side of the cage against the face of the comb, choosing such a spot that the cage will cover a place where young bees are emerging. It might also be well to include beneath the cage a little unsealed honey, altho Mr. Greiner says that this is not necessary, as the bees will feed the hatching young as well as the queen. There certainly can be no harm in allowing a little unsealed honey under the cage. Remove from the shipping-cage all of the escort bees that came with the queen. With the queen alone in the shipping-cage, open one end, and place the open end under the wirecloth cage, raising one end of the latter for this purpose. Watch carefully, and as soon as the queen leaves the shipping-cage draw it out and press down the wirecloth cage, thus caging the queen against the surface of the comb. Press the cage into the comb until the ends of the wires at the sides and ends are firmly embedded in the septum or midrib of the comb. This must be done carefully, yet thoroly, or the bees may undermine the cage and kill the queen before the time comes when they would accept her.

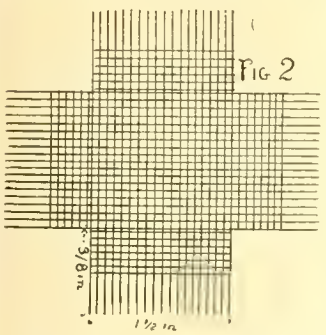


Fig 2

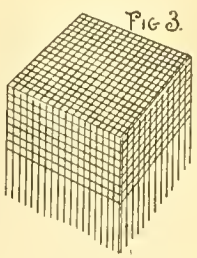


Fig 3.

In replacing the comb be sure that sufficient room is left so that the bees can pass between the cage and the adjoining comb. The queen will soon have a retinue from the newly-hatcht bees that are ready to accept her, as they have never known any other queen. She will soon begin laying in the few cells that are at her command, and when she is releast will be in nearly a normal condition, and surrounded by quite a little band of loyal followers.

In three or four days, if a fine escort is found hatcht

out under the cage, and the outside bees are seen to be feeding the queen thru the wirecloth, the cage can be gently removed, and the comb put carefully back in the hive, and there is no question but what the queen will be accepted; in fact, she has been accepted before she is thus given her larger liberty.

If the bees are seen to be angry towards the queen, clinging to the cage like so many burdocks, look thru the hive for queen-cells, destroying every one. Keep the queen caged until all of the brood is sealed, then destroy every cell before releasing her. Now that all possible hopes of rearing a queen of their own are gone, they will accept the inevitable. Not one colony in one hundred will drive you to this last resort; but you are master of the situation if you follow these instructions.—Bee-Keepers' Review.

Handling Bees—Suggestions for Beginners.

BY C. P. DADANT.

A BEE away from home, or laden with honey, never volunteers an attack. She acts only in self-defense when closely prest. This axiom is so well establisht, and so well known by apiarists, that if I were not writing mainly for beginners, I should not think of mentioning it. Thus, in order to render bees harmless, it is only necessary to cause them to fill themselves with honey, and this is done by frightening them with smoke. When smoke is driven into a hive thru the entrance, the bees at once begin filling themselves with honey. But with them as with human beings, it is the most experienced that are the slowest to take fright. So when the old bees are all at home it is more difficult, and takes more time, to compel them all to fill themselves. For that reason it is much safer to handle bees during the warmest part of the day, or at a time when the greater part of the old bees are in the field. The bees which compose a swarm are usually filled with honey for the journey that they expect to take, and are harmless, unless crusht or very much irritated by the anger of others, and the smell of the poison.

It is not absolutely necessary to smoke a colony of bees till all the bees fill themselves with honey, in order to handle them safely, but it is certainly the safest method. An expert may open a hive without smoke, and without danger, and may handle the combs and return them to the hive without getting a single sting by being quiet, steady and fearless. The Italian bees especially may often be handled without risk in this way, for they are quieter than most other races. But this method is hardly to be recommended for practical usage. It requires too much caution, and there is too much risk to run. A combination of the two methods—using a little smoke to frighten the bees whenever they show signs of irascibility, yet handling them with as little disturbance as possible—is most advisable to practical apiarists. But the one who has no fears, and handles his bees without smoke, may often cause others to be stung.

I have a friend in a neighboring city who owns a dozen colonies of bees. He had been in the habit of handling them at all times of the day, and without preparations. He told me once that his neighbors complained of his bees stinging them, and were talking of putting a complaint against him for keeping a nuisance in the city. "Yet," said he, "my bees are very quiet, and I never have to use smoke."

I accompanied him to the hives, and he opened one to show me their condition. One or two bees buzzed around my head, and I prudently retreated a few steps, for I am not at all proof against them. But he continued his investigation. After he had closed the hive I suggested that his bees were not so quiet after all, and that perhaps if they did not sting him he was in part responsible for their stinging the neighbors. I advised him to act with them just as if he were afraid of them, using a smoker and all ordinary precautions, and from that time on he had no more complaints from the neighbors.

It is a fact that the fearless apiarist may often be entirely unharmed, while others several rods away may be stung by the very bees which his manipulations anger. His quiet, determined demeanor is his safeguard, while the uninitiated strikes at the angry bee and dances till he is stung.

When you wish to open a hive of bees, if you desire to be perfectly safe, arm yourself with a smoker, cover your head with a veil, and step boldly to the front of the hive; send smoke thru the opening for a half minute, then stop and repeat the operation after another half minute, or until they make a steady hum, which will show that they have given up the desire to fight. Then open the hive, smoke again gently, and you may lift the combs one after another, shake bees on your hands, in fact, handle them like harmless, inanimate things, provided you do not press any of them too hard. Avoid quick motions, do not breathe upon them, and if there are other bees flying about in search of plunder, do not leave the hive open too long. In case of accidents the smoker should be used freely, and it ought to be at hand for any manipulation in the apiary.

It is much easier to prevent the anger of bees than to put a stop to it after it has begun. If you mismanage a colony of bees and rouse their anger, it is quite likely that this disposition will remain with them for days, for weeks, for months. A colony which has been thoroly angered may retain this ill disposition for a long time. Even if smoke is used in the manner prescribed, it becomes of no avail for a portion of the bees that seem to remember former treatment, and that simply remain passive until the smoke is cleared off, and the enemy in full sight, when they pounce upon him with a will. As I said in a previous article, cotton clothing is better than wool, and all irritating causes should be avoided. Mischievous boys who delight in poking sticks into the entrance and running away, cause more stinging than a whole season of careful management and handling.

We always use a veil fastened to the hat, and this may be slipt on or folded in the crown of the hat as occasion requires.

Gloves are not practical. A careful person will handle the bees so that a sting on the fingers will be rare, and the clumsiness caused by gloves will cause fully as much danger as there is in manipulation with the bare hands.

The most important instrument is the smoker, and the best smoker is the muzzle-loader. In guns, the breech-loader is a great improvement on the muzzle-loader, but in smokers the reverse is true. The fire must be at the bottom, at the farthest point from the nozzle, and the refilling must be on top of the coals. With a breech-loading smoker you must either unload your smoker from time to time, to fire up again, or you must put the fuel under the fire instead of over it. This is obvious. With a good smoker, after the first lighting, the fire need not go out for the entire day, if you have a whole day's work at the bees, provided you refill it with fuel as needed, and you may even leave it sitting up during the entire dinner-hour, with the certainty of finding it ready for use when you return. It is not the purpose of this article to recommend any one kind of smoker, there are half a dozen makes sold, and constantly improved for the convenience of the public. Hancock Co., Ill.

Bee-Keeping as a Specialty—Other Matters.

BY MRS. L. C. AXTELL.

IT seems to me that to throw out the thought that a person can do well and prosper in life with only bees as a business is misleading, and is doing damage to the industry, as there are so many years that the honey crop is short, that persons depending wholly on bees for a living will sooner or later give it up with disgust.

Most of those who make it a specialty, make a part of their living by writing for the bee-papers, or by lecturing on bees, or something else, rather than merely keeping them for what honey they gather. Those contemplating going into the business as a specialty are young people and beginners, many of whom, if not the greater part, would not succeed as specialists.

The bee-business with farming will pay well; the bees will help pay for the farm, much of the bee-work can be done in the winter, and it is something that the whole family—father, mother, and all the children—can work at from January to January, and during the hurried months of farming there need be but little left to be done with bees except what the women-folks and children can do, unless there are many colonies.

STRAWBERRIES AND BEE-KEEPING.

These go well together. If the strawberries are properly cultivated there never need be a failure, and they ripen and are gone before the height of the honey crop, only the later ones lap on swarming-time.

POULTRY AND BEE-KEEPING.

The poultry business, too, goes well with bees. They are a steady profit one month after another, and so are hardly appreciated as they should be. Many make a failure

with poultry by trying to keep too many. They reason that because a few pay, a good many will pay better. But if a few are kept of some pure breed, that will pay for selling both poultry and eggs for hatching, besides what is sold to the butchers and grocers, they will help along nicely, more than they get credit for.

I see no reason why all the above might not be combined with bee-keeping, and other industries besides. I think it not best to keep "all the eggs in one basket," so if one fails somewhat others will not. True, some years some may be more neglected than they should be.

It does not cost much to keep bees after one has them, and when they fail to get honey let them alone, only see to it that they do not starve out. Many who keep only a few bees take away what they can get at such times, and fail to feed back if needed, and so let the bees starve out. Perhaps the very next year they would have paid their owner largely if they had not been robbed. But if they have barely enough to keep them alive, bee-keeping, like all other industries, does not pay. We should not keep more bees than we can care for, nor more than will do well in our locality.

Carpenters, merchants, dressmakers, seamstresses and school-teachers, it seems to me, might all keep a few colonies of bees and make them profitable, and find much enjoyment and health in caring for them. Especially those who are much confined to the house would find it a real recreation if they would begin with the right kind of a hive, gentle bees, etc., and face well protected from stings. There is so much that is interesting in their habits that they will soon learn to love to work with them.

BEES FOR THE CHILDREN.

The neighbor who is wise enough to devise plans to make his children love home gives each one a calf and a colony of bees, from the oldest to the youngest, if he will care for them. It is interesting to see how they watch father care for his bees, and how gladly they help him, so he will help them back, and so care for their bees. When they get stung they try to bravely bear it, and when they get homes of their own, it will cost them but a trifle to begin bee-keeping on a larger scale. The calves become their playmates, and make them love home all the more—to think they own something themselves.

BEES FOR HIRED HELP.

A few years ago I had a young girl working for me, helping at housework and bee-work. She bought a colony from us, and paid for it in work, took it to her father's home (about six miles away, as there were not many bees, and it seemed to be a good location for them.) They did well for her; she learned from us how to care for them, and would go home occasionally and put them in order for each season of the year. I do not know how much honey she got, but quite a considerable, the most of which she gave to her parents, but she married in two years or so, and sold her bees for $30, having increast them to six colonies. The $30 was quite a little help to her in buying her bridal outfit, as her parents were quite too poor to assist her much. I think a wiser way would have been to have held on to her bees, to have taken them to a home of her own, and to have been married in a calico dress rather than part with her bees.

Many localities change from being good for bees to being poor, by being highly cultivated, and crops raised that yield no honey. That is partly the case in our neighborhood; all low lands and heads of slough are tiled, and corn and other crops raised, so that little room is left for Spanish-needle and wild flowers. Warren Co., Ill.

Planting for Honey—Buckwheat, Etc.

BY F. A. SNELL.

IN addition to the farm crops that are valuable for both stock and grain, we have only one more to name for our section of country, or our latitude, that is also valuable as a honey-plant, and that is buckwheat, which affords a good yield of both grain and honey when conditions are favorable. We have three varieties of this—that known as Japanese, the silver-hull, and the common. I have grown each variety, and for a grain crop the Japanese has proved to be superior, as it has given the largest yield. For the honey crop either produces well in good seasons.

Buckwheat is the only crop that we plant for a fall honey crop. This crop is, as a rule, profitable to the farmer bee-keeper. Even if no surplus honey is secured from it, enough may be gathered by our bees to keep up brood-rearing, which is of great importance, especially where fall flowers are otherwise scarce. As I have said in another place, successful wintering depends very largely upon having a strong force of young bees with which to go into winter.

I omitted in my list of honey-producing trees the locust, which yields well in honey, and is valuable for timber also, but with us the borers ruined our groves some years ago, so that its planting has been dropt. The few trees remaining bloom each season profusely, coming in a little before white clover. In sections where the tree will thrive, no doubt it will pay to grow it. One objection to it is, it is hard to rid the ground from it after once establisht.

I am prompted to write what I have on the subject by a realization of the fact that we cannot do too much in planting to increase the honey-flow, and the sooner we as bee-keepers realize this and act in this direction the better. In the list of trees, bushes and plants named in these articles, I have named only those that produce for the apiarist at least a double crop or harvest, either of which will pay well for time and money invested, and add to the value and beauty of many a home if the suggestions made are carried out.

The amount of fruit that may be grown on a plat of two acres with good care is almost surprising. Planting of cherry, plum, apricot, quince, peach and pear trees may be made at a distance of 15 feet apart each way, and will allow 205 trees to an acre of ground. Apples planted at a distance of 20 feet each way will give 110 trees to the acre. Any small fruit, such as raspberries, blackberries, strawberries, currants, gooseberries, etc., may be planted in rows a suitable distance apart between the rows of fruit-trees, and will soon come into bearing, and pay good rent on the entire plat put out. These returns will come in the second year, and will in addition to rent return pay for all labor given, if good culture is given, with most of the small fruit named.

In a few more years the trees will come into bearing, and it is useless to give here the value in dollars and cents that the crops secured will be worth. It is self-evident to all thinking people that such an investment would be a good one for any painstaking person. There is another consideration in the matter above dollars. We would be adding beauty to our home surroundings, and health to ourselves and families, as well as be doing a good work for posterity, thus proving our devotion to home and country, as becomes every true patriot.

Much more could be written in advocacy of planting to secure honey, fruit, etc., but I think the above will suffice, and if only a few follow the suggestions or thoughts advanced by me, my feeble effort in this direction will not have been in vain. Carroll Co., Ill.

Mr. G. M. Doolittle's Queen-Rearing Methods.

IN response to a question in Gleanings in Bee-Culture, as to whether Mr. Doolittle has made any advanced steps over those taught in his book on queen-rearing, he replied that he had nothing newer than what is contained in his "Scientific Queen-Rearing," the remarkable feat of securing 600 sealed queen-cells from one colony, the queen laying all the while, having been accomplisht by simply following the instructions laid down in his book. Going into details, he said:—EDITOR.]

When spring opens I select one of the strongest colonies I have in the yard, and one having a queen reared the summer before, as I wish one which is not liable to fail in her egg-laying powers before the season is over, as that *laying* queen below has very much to do with queens of the *best* quality, in my opinion.

About the 10th to the middle of May I go to several hives till I find the number of combs of *sealed* brood that are necessary to take the place of those having no brood in them in the hive I have selected, which is generally from two to four. These combs of brood (without bees) are now set in the hive, when in a week or ten days I have a colony strong enough to commence operations. Perhaps I should say just here that I use nine Gallup frames in this hive, which is a *chaff* hive, and that I bring from my out-apiary, the fall before, the queen to rule over this hive, which is a mismated (or "hybrid") queen, as generally called, for I

find that hybrid bees, showing about as many black bees as those with yellow bands, will build and complete nearly double the number of cells as will pure Italians, and seem to take to this line of work better than any other. I usually bring several queens of this class to take the place of those sold, and then select the strongest colony having one of these queens. As soon as the selection is made the rest are used in the out-apiary again. I tell this only as I wish to give everything just as I do it.

As soon as the colony is strong enough to go into the upper story, I take two combs from below, having *mostly* eggs and unsealed larvæ in them (don't take any drone-larvæ, as drones above a queen-excluder are always a nuisance), and in their places put two combs of sealed brood from other hives, as we wish all the bees possible thus early in the season.

I now put on top of the hive a hive having a queen-excluder *nailed* to its bottom (if thus nailed we never have to touch the excluder if we wish to remove the upper hive during the season), as it always comes off with the upper hive, and in the center of this upper hive put the two combs of brood, four frames well filled with honey, a division-board feeder, and two dummies made from inch or ⅞s lumber.

When about two days have elapst for the colony to adjust itself to the new conditions, it being fed about a pint of *thin* sweet every night, if honey is not coming in from the field, they are ready for a batch of prepared cell-cups, as given in my book. To tell all about how to prepare these would be too long for this place; but all can find all about the matter by turning to chapter 7 of the book, and I could not tell that part any better were I to try it over again.

Before going for the royal jelly and the larvæ to transfer into it, I stop at the hive, take out one of the dummies, shove the frames that way till I leave a frame's space between the combs of brood, when the cover is put on. As a rule it takes me from 15 to 20 minutes to get the royal jelly, the larvæ, put the jelly and larvæ into the cell-cups, and get the now prepared frame to the prepared hive. I now remove the covering (which is a quilt, with a 4-inch sawdust cushion over it, and a hood or cap 8 inches deep over all), when I find the space left for the prepared frame completely filled with bees—so much so that I have to work the frame slowly up and down in lowering it, so as to cause the bees to run out of the way. I don't know that causing the bees to cluster in this vacant space between the frames of brood has anything to do with the matter, but it has always seemed to me that they are better prepared with royal jelly and for queen-rearing by doing so.

Three days later I go to the hive again, take out the other dummy, draw the frames to the side of the hive until I come to the first frame having brood in it, when I lift the frame of cells, take off one or two of them, for the royal jelly needed to start the next "batch," when the frame of cells is placed in the vacant space behind the frame of brood, caused by taking out the dummy and drawing the others along, thus preparing the same place for the next frame of prepared cell-cups which the first one occupied, and when all ready it is placed there as was the first. Three days later a frame of honey is taken out from the opposite side from which the last dummy was taken, the frames again drawn along till we come to the frame of brood, when the last prepared frame of cells is taken out, one or two taken off for royal jelly, and the frame "jumpt" to the outside of the frame of brood, which gives room for the third prepared frame between the frames of brood again, where it is placed as soon as prepared.

As I do no work with the bees on Sunday, I time it so that no cells have to come off that day, and so four days now elapse before I put in another prepared frame, which makes ten days from the time we started, so that we really have only three prepared frames every ten days.

I now take out the frame of "ripe" cells, or the first one prepared, and distribute them where wanted, getting the bees off, etc., as given in chapters 8 and 9 of the book, when I lift out the two frames of brood, look them over to make sure that the bees started no queen-cells on these frames (unless this is done we *may* have a queen hatch when we least expect, and destroy all of the cells on the other prepared frames), when these two frames of now sealed brood are "jumpt" over behind the two frames of cells now remaining. I now take out a frame of honey on each side, and all the frames along toward either side of the hive, so as to make room for two frames containing eggs and larvæ taken from any hives in the yard (generally from nuclei when under full headway later on), which are placed in the center of the hive again, as the first two were, being left apart for the fourth prepared frame, which is now fixt as was the others, and put in.

Onondaga Co., N. Y. G. M. DOOLITTLE.

[We mail Mr. Doolittle's book, "Scientific Queen-Rearing," for $1.00; or we club it with the American Bee Journal one year—both for $1.70. Every bee-keeper who gets it will be fascinated with the way in which Mr. Doolittle tells his story of rearing queens. And, besides, the reader will learn just how the "king of queen-breeders" does it.—ED.]

Queen Insensible by Cold Still Valuable.

BY W. W. M'NEAL.

NOW here is to those who say a queen-bee is "no good" after having been rendered insensible by cold:

Last winter, a little time previous to the cold spell that began in the latter part of January and closed Feb. 15, I had a number of nuclei containing choice queens to be used in cases of emergency, and for replacing inferior queens in full colonies when the bee-season opened. Well, upon passing thru the apiary one cold day toward evening, I tapt on several of the small hives to see if the bees were still alive; they all responded but one. I did not open the hive then, but waited until in the afternoon of the next day. When I opened it the sun was shining, but the wind was blowing and the air cold. The bees were apparently as dead as they could be. I lifted the combs from the hive and stood them in a sheltered place from the wind where the sun could shine directly on them and the bees. In a short while I saw signs of life, and most of the bees with the queen were soon able to crawl about on the combs. Many of the bees, as I have often before witnest, had crawled into the cells in a compact mass, whether in a vain endeavor to keep warm or in sheer desperation from hunger I do not know. But upon becoming sufficiently warmed they backt out of the cells and partook of honey ravenously. If I mistake not, a bee that dies solely from starvation always has the tongue extended.

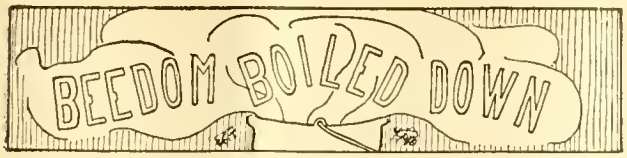
I constructed a still smaller hive for the remaining bees, and after getting them into it, I carried it into the house, where it remained for several days on the mantle-piece close by the fire in the grate. Then it was I noticed a queen lying at the entrance of a hive containing one of my best colonies. I waited till dark, when by the aid of a lantern and a smoker I made an effort to get the little colony into the large hive by way of the entrance. I might add that the weather at this time had moderated somewhat, tho I did not care to break the covering to the hive.

The bees of both colonies fought till I believe every bee belonging to the smaller one—excepting the queen—was killed. I also feared that possibly the large colony contained a young queen and it was the old one I had found at the entrance. But if they did I was never able to find her, tho I took special care to clear the ground in front of the hive that I might see a queen, if she were carried out by the bees. And, besides, the queen introduced was so markt as not to be mistaken for another. This queen is now the mother of a powerful colony of bees—worker-bees. I believe it has been claimed that such queens lay only drone-eggs.

Scioto Co., Ohio.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.



Yellow Sweet Clover is of more value than the white, according to John Weir in the bulletin of Kansas University, as it blooms six weeks earlier, and at a time when forage is scarce.

Boiling Foul-Broody Honey Three Hours, Editor Doolittle, in the Progressive Bee-Keeper, thinks unnecessary, and he speaks of thousands of colonies "being cured by having 'scalded' foul-broody honey fed back to them without their ever having the disease again during the years between 1850 and 1890."

Carelessness in Uncapping is charged by the editor of American Bee-Keeper as a fault in a number of apiaries he has recently visited. He says: "If we would preserve the even surface of our combs, essential to rapid and satisfactory work with the extractor, it is important that every cell be uncapt, and the frames accurately spaced when returned to the bees."

Egg-Laying Capacity of Queens.—Chas. Dadant figures in Gleanings in Bee-Culture that Mr. Doolittle's favorite hive, the Gallup, "has room for but 2,400 eggs per day, while a good queen can lay more than 3,000 eggs daily." Mr. Dadant found by actual measurement of comb surface that several good colonies had 70,000 to 80,000 cells in each occupied with eggs and brood, making 3,300 to 3,800 eggs laid daily.

Precaution Against Foul Brood.—One of the best precautions against foul brood, according to M. Bertrand, editor of Revue Internationale, is to keep the colonies strong and in healthy condition. While the disease does not appear spontaneously, a weak or diseased colony is a much more promising field for the growth of the germs than one that is strong and healthy. As it is good practice on other accounts to keep only strong colonies, his advice will commend itself to practical bee-keepers.

Foul Brood had considerable discussion at the Ontario convention. Some thought the hives should not be used again without boiling or other special treatment, but Inspector McEvoy was very emphatic that the hive needed no treatment whatever. Askt how long honey taken from an infected colony should be boiled before it was fit to feed to bees, he said: "I never recommend it at all from the first summer, because I couldn't trust the people. I have never had any trouble when they put half water with it and bring it to a sharp, bubbling boil."—Canadian Bee Journal.

Behavior of Swarming Clipt Queens.—In the Australian Bee-Bulletin the following question is askt: "Suppose a queen with her wing clipt leaves a hive with a swarm and there is no one about to hive the swarm, will the queen never go back to the hive if left alone"? The answers vary somewhat. One says she will return with the swarm if the grass is thick, and six or eight inches high. Another that she'll return four times out of five, but will come out day after day until the young queen emerges, when she will be no more. Another that she will generally be found several feet or yards away with a ball of bees. But one man thinks that a clipt queen which issues with a swarm never re-enters the hive. In this country she can be relied upon to get back in most cases if she can.

On the Poison of Honey-Bees.—The poison drop, freshly excreted, weighs from 0.0002 to 0.0004 gm. It has a specific gravity of 1.0013, is clear as water, and has a markt acid reaction, bitter taste, and a pleasant, aromatic odor. The poison was obtained by collecting the drops, or by extracting the entire poison apparatus with alcohol. This caused coagulation, and the poison was taken up by the alcohol. When the alcohol was supersaturated with ammonia and evaporated, a yellowish material was obtained. Solutions of this gave reactions of formic acid. The author's investigations, however, showed that formic acid does not possess the poisonous properties of the bee-poison. The solution of the poison contains an albuminiod, hydrochloric and phosphoric acids, sodium and calcium. The albumin does not produce the poisoning, since a solution of the poison freed from it produced poisoning symptoms, as observed on the conjunctiva of a rabbit's eye. Evaporating the poison and heating at 100 degrees does not diminish its properties, nor does keeping it for some time in sealed capillary tubes. On the other hand, when kept in open glass tubes the poisonous properties are lost in about four weeks. The poison spoils on standing, and loses its toxic properties. The poisonous substance is held in suspension by acid, and can be precipitated by alkali. This shows that the active principle secreted by members of the aculeata group of Hymenoptera is a base.—J. Langer, in Experiment Station Reports.

Section-Cleaning Machines that give entire satisfaction do not seem to be as easily within reach as at first was supposed, altho there is little doubt that the section-cleaning of the future will be done by machinery. Editor Root in Gleanings in Bee-Culture says the solid disk sand-wheel is not a success, because it fills up with propolis, altho Mr. Golden claims good work with a sanded belt. The Aspinwall machine is fitted with knives, and does not clog, but Mr. Root says he has not yet been able to do as smooth work with it as by hand. Perhaps the machine heretofore described on these pages by C. Davenport may be as good as any.

Thick or Thin Combs for Extracting?—In the discussion reported in Canadian Bee Journal, the general opinion seemed to be that there was an advantage in the thick combs because the cappings projected out past the frame, making it easier to uncap; but Mr. McEvoy went so far as to have some combs 1¾ inches thick, and didn't like them. The Hoffman frames were troublesome about uncapping, because the shoulders stuck out in the way. Mr. Armstrong said the Hoffman shoulders would not be in the way if the comb was built thick enough. Mr. Darling said the thick comb bulged the screen in the extracting-basket, and so it might get out of place.

Foul Brood Needs Severe Treatment.—In Gleanings in Bee-Culture appears the same picture of foul brood that appeared some time ago in this journal from a photograph by Thos. Wm. Cowan, and referring to it Editor Root says:

"If I had combs as badly diseased as the one shown in the illustration, I would burn them at night if possible, and then bury the ashes below the reach of a plow or spade. In the light of our present knowledge of the difficulty of killing the spores of this enemy at a boiling temperature, I would never think of extracting foul-broody honey. I would count it as profit and loss, and consign it all to the bonfire, combs and all."

Growing Basswoods from the Seeds is reported by A. I. Root as a rather difficult thing, and he asks in Gleanings in Bee-Culture: "Can anybody tell us how to get 50 percent, or even 25 percent, of the seeds to germinate"? He has sowed the seeds at almost all times with almost no success, but in some cases the seeds came up readily of themselves without any sowing. A peck of seed was drilled in upon four rods of ground, but not a dozen trees came up the following spring, and the bed was sowed with asparagus. He is convinced that basswoods grow with much more vigor on very rich ground, especially that which has been manured for many years, so that it is old, black, and rich. On such ground he has had little trees grow three feet high the first season.

Suppression of Swarming is satisfactorily secured by R. Pincot, as reported in Le Ruches Belge, by taking away all frames of brood except two containing mostly eggs and young brood. This is done when preparations for swarming begin in the way of starting queen-cells. All queen-cells are carefully cut out from the two frames of brood that are left, and the bees brusht from the combs removed, abundance of super room being furnisht. The combs of brood thus removed from several colonies are put in empty hives, eight frames of brood in each hive, all queen-cells carefully cut out, then a colony of medium strength is removed from its stand and a hive with its eight frames of brood put on the stand. A young laying queen from a nucleus is put in the hive caged, and liberated two days later. After practicing this plan for two years he thinks well of it.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Probably Superseding the Queen.

I have a prime swarm of black bees, hived June 9, that insist on storing queen-cells at a lively rate, something I have never seen before. What is the matter with them? I have been cutting them out as fast as they build them. Is that right? ILLINOIS.

ANSWERS.—The bees probably want to supersede their queen. If you would keep close watch of the matter you would probably find that about one out of three of your swarms supersedes its queen some time after swarming. In other words, every queen, in the normal course of affairs, is superseded before she dies, and altho occasionally this superseding may be before swarming-time, it is usually after. If queens average a life of three years, that makes about a third of them to be superseded every year.

Separating Wax from Honey.

I have bought several hundred pounds of "chunk honey" from the farmers here, and wish to separate the wax from the honey.

1. How can I render it in the most economical manner, and with the least trouble?

2. If in the solar extractor, how shall I make it so that the hot sun will not injure the honey in melting the wax? GEORGIA.

ANSWERS.—1. Probably the solar extractor will fill the bill as well as anything.

2. Partially shade the extractor, so there will be merely heat enough to melt. Perhaps a thin cloth hung over will effect it. By a little experimenting you will settle on the right thing. It may be well to empty the extractor frequently, for the long-continued heat is bad for the honey. Pour out the melted wax and honey, and let it cool and separate outside the extractor.

Queen Flying After Introducing—Drones Flying Before the First Swarm.

1. I sent for an untested queen and put her into a small hive with hatching brood, and in a week or two I let the bees out, and in a day or so more I saw the queen out flying around. She kept on for a week. Why?

2. Do drones hatch out and fly before the first swarm issues? NEW YORK.

ANSWERS.—1. I don't know. Sometimes a nucleus with a laying queen will swarm out for no apparent reason except the weakness of the nucleus, but they don't usually go back so many times. If the queen was unfertilized the bees might have gone with her on her wedding-flight.

2. Oh, yes; drones may fly out, plenty of them, long before any swarm. Indeed, you are not likely to see a swarm without plenty of drones first.

An Unusual Case of Swarming.

Did you ever have an experience like this? June 14 I hived a very large swarm of bees in an 11-frame dovetail hive. A neighbor indicated the hive she thought the swarm came from, and altho I thought there were a large number of flying bees for a colony that had cast so large a swarm, I removed the old hive to a new stand, and put the new one in its place that evening. At noon the next day the hive was so crowded that I put a super on it, which before night was full of bees. On the 18th (Sunday) I hived another very large swarm, and in looking to see if I could find where it came from (I was not out when they swarmed), I discovered that they undoubtedly came from the colony hived on the 14th. I thought of course they had swarmed out, but on examination I found a good, fair-sized colony left in the hive, four frames of eggs, six or eight of them in queen-cells. They were hived on 11 full combs. COLORADO.

ANSWER.—No, I never had an experience of the kind, and altho I think I have read of such a thing it is *very* unusual for a swarm to send out a swarm four days after being hived. It is quite possible that you made a mistake as to the colony from which the first swarm issued, and as in that case you would put the swarm in place of a strong colony that had not swarmed, your swarm would be very much stronger than if you had put the swarm in the place of the colony from which the swarm had issued.

Small Bee with the Hive-Bees.

I see a small bee working with regular worker-bees, not over half their size, or considerably smaller than the smallest young bees of the hive. An old bee-keeper I askt about them says they deposit their honey in a mullein-stalk, and that they have a sting. They are about the color of a hybrid, or nearer the color of Italian than the black bee with (not bright) yellow bands. Do they die out every year like wasps? MASSACHUSETTS.

ANSWER.—You say you see them "working with regular worker-bees," but that may mean in the hive or out of the hive. If you mean they are in the hive, then they are dwarfs of the regular hive-bee, made dwarfs, probably, because the comb in which they were reared was bent or crowded in some way so that the young bees in the cells hadn't room enough. Such a thing may happen on rare occasions in any hive, and no dwarfs afterward be found in the same colony.

If you mean you see them working with regular working-bees out on the flowers, then they may be wild bees, of which there are a great many kinds. Most of them have stings, and die off like wasps and bumble-bees, a fresh colony being started in the spring with a single female bee.

Smoking Bees—Large Colonies.

1. As my bees are very bad fighters, shall I smoke them at the entrance, or how, as the brood-chamber is above two supers with the frames, and I will have to lift it off to get the two supers away from under it?

2. Do you smoke bees from the entrance in removing sections from the super, or do you smoke from the top?

3. I took off 39 pounds this week, of as nice and clean white clover honey as you ever saw. My bees are working on the blossoms of the cigar tree, and also on the leaves of the mulberry trees. We have plenty of white clover yet, and sweet clover is just coming into blossom nicely. Last season I had one of my hives to cast the largest swarm I ever saw, and I put them back into the parent hive; they have filled two supers with eight frames and are working nicely in two supers with sections. Would you advise taking away the two supers with the eight frames now, or later on in the fall?

4. I have kept my bees from swarming by entrance-guards in front and by returning the swarm to the parent hive, and giving them plenty of room in the supers. I do not know how the brood-chamber is on any of them, as my bees are so cross I cannot handle them without they go for everybody around the place, even for the chickens (my hives are on a bench two feet from the ground) so I do not bother them any more than I can help. My father's bees are very gentle (and my bees are the swarms from his colonies), and his can be handled any way even by me, so I do not think it my fault on account of hard handling, as I am very careful. My father keeps his bees in the city, which may account for their gentleness.

5. What is the price of a bee-escape by mail?

6. My father allowed one of his colonies to swarm today, because he thought there were too many bees in the hive. Don't you advise keeping them as large as possible, and get better results in the sections? I told him I thought so, any way, from what I had read. MARYLAND.

ANSWERS.—1. From what you say about your bees, the probability is that you may need to give them smoke wher-

ever there is a chance for it. However, if you go at it in the right way, you may not find they need so much more smoke than your father's. Perhaps the reason yours are so much worse to handle than his is because they are handled less. If bees are where people are constantly passing they seem to get used to it. First blow a few puffs in the entrance, not more than two or three puffs of smoke. Then you will probably lift off the super of sections. Pry it up a little at one end, and blow in a little smoke there. Then lift off the section-super and blow smoke over the brood-chamber. Then pry up one end of the brood-chamber, and blow a little smoke in the opening, if they seem to need it, and some more over the supers that are under, after you have lifted off the brood-chamber, when you can lift away the supers from below. But don't be surprised if you find little but brood in the supers that are below.

2. You will smoke about in the same way when taking off the super of sections. First a little smoke at the entrance, then raise the cover a little and smoke, then smoke over the whole top of the super before removing it. Indeed, you may give a good deal of smoke over the top of the super before taking it off, so that a large number of bees will run down out of the sections, but if you pour in too much strong smoke the honey will taste of it. In subduing bees with smoke, be guided by their actions. When they show that they are ready to give up and get out of the way, then let up on the smoke business. If they show fight, give them a little more smoke. It's useless and cruel to smoke the poor things when they don't need it.

3. If there is only honey in the two 8-frame supers, it matters little whether they are taken away now or in the fall. If they contain brood—and very likely they do—then you will do well to leave them till fall.

4. Don't carry that entrance-guard business too far. It will be all right so long as the old queen is there, and may do for a time after, but you may count on the old queen being put out of the way in a week or 10 days after the issue of the first swarm. Then you have virgin queens to deal with, and when it comes time for the one in the hive to be fertilized, she must be allowed to fly out or she never will produce anything but drones.

5. The price of a bee-escape by mail is 20 cents.

6. Yes, it is generally supposed that more honey will be obtained by keeping the forces together as much as possible where the honey harvest is somewhat early and short, but where the harvest is late and long-continued a colony and its swarm may get more than the colony alone if it should not swarm. But bees don't always submit patiently to be kept from swarming, and some think it best to allow one swarm to each colony. Others say that by giving plenty of room both in the brood and surplus apartments there is little need of swarming.

Queen Going Into the Supers.

I have a colony of bees that hasn't swarmed this spring. Early in the spring I put two supers on, and as they did not swarm I investigated and found plenty of comb, but the queen had deposited it full of eggs. I would like to know the cause of her leaving the hive and going into the supers? NEBR.

ANSWER.—Probably because of lack of room in the brood-chamber. If the supers contained sections, it was a little unusual, and might not happen again in a long time. If the supers contained extracting-combs, it was not strange for the queen to go up and lay. You can make sure against such a thing by using a queen-excluder under the supers, but such a thing is hardly needed under sections.

Swarms that Returned.

I have 20 colonies of Italian bees in Langstroth hives. Last week I had 15 swarms to issue, some settling and some not, but all returned to their hives—I did not save one. Why do they swarm and go back? I've only saved three swarms this season. Several colonies have swarmed as many as three different times, and have gone back. Why do they go back so much? VIRGINIA.

ANSWER.—You say you've had a large number of swarms and have saved only three, the rest going back to their hives. Most bee-keepers would probably say that the swarms that went back to their hives were all saved, and saved in the best kind of a way.

Your bees have acted just as they would if the queens were all clipt. When a queen's wings are clipt she cannot go with the swarm, so the swarm returns, sometimes not clustering at all, sometimes clustering before returning. The queen generally returns to the hive, if the hive is so placed that she can get back, and then the swarm may issue once or several times within the next week. After that time, or rather about eight days later than the issue of the first swarm, the young queen appears on the scene, and then the swarm is not likely to return.

If your queens were not clipt, it would seem that they were by some means incapable of flying with the swarm, a thing that would hardly seem likely to happen in such wholesale manner by accident. By the time this reaches you, you will probably have plenty of swarms that have not returned, and it would be interesting to have you report progress.

Another thing that just possibly might be, but hardly on so large a scale, is this: Your colonies might have intended swarming, then conditions being very unfavorable they may have given it up when the young queens were sealed over, and these swarms may have issued to accompany the young queens on their flight.

Questions on Transferring Bees.

1. How can I transfer bees from a box-hive to a dovetail hive?

2. When is the best time to do it?

3. How long will I have to leave the box-hive by the other one?

4. How late in the season can I wait and then have time for them to store honey enough to winter on? CONN.

ANSWERS.—1. There is nothing specially different in transferring into dovetailed hives from transferring into any frame hive. The instructions given in your text-book will be all right for dovetailed hives.

2. Fruit-bloom is generally considered the best time, altho it may be done at any time when honey is yielding.

3. After the contents of the box-hive are transferred there is no longer need to leave the old hive.

4. That depends altogether on the season and the honey-flow. If there is a heavy flow from fall flowers, it might be safe to transfer in August and have the colony all right for winter. Sometimes it would not be safe after the white clover harvest. On the whole, perhaps your better plan would be to wait till next season, and very likely you will be better satisfied to wait until the bees swarm, hiving the swarm in the frame hive, then taking out the contents of the box-hive three weeks later, when all worker-brood would be hatcht out. Possibly, however, the bees may swarm yet this year, when you can hive the swarm in the new hive, setting the box-hive beside it, and 21 days later cutting out the contents of the box-hive, adding the bees to the swarm.

Yield of Basswood in Wet and Dry Seasons—Feeding Bees.

1. Will basswood yield as much honey in wet seasons as in dry ones? The basswood here is full of buds, but we have so very much rain all the spring. It is so wet every morning. It doesn't rain much in the daytime, only at night.

2. I have 42 colonies of bees, and have to feed them. There is very little white clover here this year, but plenty of young clover that came up this spring from the seed. The ground is full, but I think this will not yield any honey till next year, but the basswood is full of buds. I have fed two barrels of sugar already. Will it pay to feed bees in this way at such times? Would you feed them? IOWA.

ANSWERS.—1. Basswood may yield as much when very wet, but the nectar being thinner it takes more time to evaporate it, and consequently a less number of pounds in the sections.

2. It will probably pay to feed any time when bees are getting nothing and there is scarcity in the brood-chamber. It would be poor policy to let bees starve to death and give you no crop next year, when by an outlay of a dollar or so for each colony you might get back five times as much next year.

The Premiums offered on page 442 are well worth working for. Look at them.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Pure-Food Commissioner for Illinois.—Mr. T. L. Chapman, of Jerseyville, an ex-State Senator, was appointed June 28th by Gov. Tanner as pure-food commissioner under the act past by the last general assembly creating the office. Referring to the appointment, Gov. Tanner had this to say, as reported in the Chicago Record:

"I consider this the most important appointment made or to be made by this administration. It is important from the fact that the law creating the office of pure-food commissioner is a very drastic one, giving to the commissioner extraordinarily arbitrary powers. Therefore, after worrying much over the selection, I arrived at the conclusion that it was the duty of the executive to select some one outside of the interests affected, wholly without prejudice—an honest, fair-minded man of good ability, broad-minded and conservative, yet firm. Taking this view of the matter I determined upon the selection of a lawyer, the best lawyer I could secure to take the place, a man who knew the law and had the courage to enforce it."

We certainly hope that Mr. Chapman is the right man for the place. If he proves so to be, he will find strong support among the bee-keepers of the State, who are anxious that he shall apply the law against the shameful adulteration of honey, particularly here in Chicago where the most of the adulterating is done.

Alfalfa, Grasshoppers, Bees: Their Relationship, is the title of a bulletin of the Department of Entomology of the University of Kansas. The author is Prof. S. J. Hunter, a young man who made an excellent impression upon the national convention last year at Omaha. The pamphlet contains 152 octavo pages, and is a beautiful specimen of the typographical art, containing a large number of fine illustrations, mostly original. Eighty pages are devoted to bees, with some special attention to alfalfa as a honey-plant, and the advantage of bees to alfalfa. Alfalfa continues to secrete nectar as long as the blossom flourishes, and does its best under circumstances which tend to give the plant most vigorous growth. On dry upland the bees neglect it. Beginning with June it yields honey three or four months.

A careful comparison of two fields similarly situated except that only one of them had the visits of bees, showed 66 percent more seeds on the alfalfa visited by bees.

A plate gives six kinds of honey in test-tubes, showing the comparative degrees of light and shade. Alfalfa is a little darker than white clover. The lightest of all is a mixture of alfalfa and melon bloom. Sweet clover is the darkest of all except knotweed. Basswood, like alfalfa, is darker than white clover. In other States the comparison might be different.

Something like a condenst treatise on bee-keeping is given, the first part evidently being written by one who got his information at second hand, and not always from the most reliable source, as when it is said, "Should the colony be deprived of its queen, the workers hasten the appearance of a new queen by tearing down the partition walls between three surrounding cells, taking the contents away and leaving one egg to be fed for the throne." But these are minor blemishes.

Forty pages are occupied with plain and simple instructions for the beginner in bee-keeping, being written by a practical bee-keeper of experience, A. H. Duff. Mr. Duff writes as one evidently familiar with practical bee-keeping, and some of his ideas may be given at another time. Prof. Hunter has done a good work.

The Age of Brood-Combs that may be reacht without unfitting them for good service is a matter in dispute. Some think they should not not be more than five years old, while others think they should never be discarded on account of age. In Apiculteur, a foreign bee-paper, is reported a hive of combs that had been in constant use for 30 years, the combs being very dark, and bending easily without breaking. The bees reared in them showed no signs of deterioration.

The Honey Season for 1899 is thus commented upon by Editor Root in Gleanings in Bee-Culture for July 1:

So far reports are very meager, and such as have already come in do not indicate any very great show of surplus for most localities. There will be more of a crop than last year, but even then probably below the average. The season seems to be late everywhere, and basswoods are only just beginning to open in many places. So far reports seem to indicate that Colorado will more than hold her own. In California there will be a very light crop—less than a quarter. We have received letters from Wisconsin, Iowa, and Tennessee, indicating no honey; but for Wisconsin, at least, it is a little early to forecast the crop. In New York, reports indicate that there will be a fair crop of clover and basswood, which will, no doubt, be followed by the usual flow from buckwheat. From Michigan we have some bad reports as well as good ones. N. E. Doane writes that willow-herb has "about had its run," and this is usually one of the unfailing sources of honey. Byron Walker, of Michigan, writes much more encouragingly. The nectar-flow in and about Medina, while better than last year, will be rather light. Mr. Burt will get a super of comb honey from each one of his 300 colonies.

The conditions in the latter part of May and early part of June, while very favorable, have been rather unfavor-

able during the last two weeks of June. We have had quite hot weather followed by too many cool days and nights, and there is not liable to be a nectar secretion in cool weather; altho this morning (June 30) when the temperature was as low as 55 degrees by a tested thermometer, the bees were working lively on the basswoods in front of my house. At this writing, bees are gathering honey from both clover and basswood, and if they only *hang on* we shall have nothing to complain of.

Curious Result from Scraping Hives.—We take the following paragraphs from the British Bee Journal:

A neighbor of mine came to me about 12 months ago with his face swollen so that he could hardly see, and askt me what I thought was the matter with him. "I should say you have been stung," I replied. He assured me he had not, but that he had been scraping out and cleaning two bar-framed hives he had had given him, and thought the dust from the hives had caused the swelling and rash. However, he got better of that, but now, a week or two ago, when he was cleaning out his shed (where he had a year ago scraped the hives), he says he must have got some more of the dust into his face and arms again. But he has been much worse than before, for he has been treated by a doctor for a week. He never toucht the hives on the second occasion. Is this not very curious?—F. W. Morey.

[It is so "curious" that we cannot possibly imagine your friend being right in attributing the trouble to the bee-hives.—Editors.]

Probably most bee-keepers will have the same opinion as the editors. It is just possible, however, that the dust of the propolis may have occasioned the trouble. Two or more cases have been reported on this side the water, in which a similar swelling followed the act of scraping sections, and there may be cases in which the skin is abnormally sensitive to the irritation of propolis.

Transferring Bees—Three Methods.—Mr. F. G. Herman, of New Jersey, gives the following three ways for transferring bees, in a recent issue of the American Agriculturist:

There are at least three ways of transferring bees from box-hives into movable-frame hives. The old method is to pry open the old hive with cold-chisel and hammer and cut out the combs and fit them into the frames of the movable-frame hive, and fasten them in with sticks and strings. After trying this method on several colonies I must pronounce it mussy, sticky and unsatisfactory. A much better way is to drive them out by the following plan:

Take the hive of the colony which is to be transferred under a tree in the shade, or alongside of a building, and turn it bottom up, place on top of it an empty box of the same size, blow in a little smoke at the bottom occasionally, and drum on the old hive with a couple of sticks for 10 or 15 minutes. Nearly all the bees and the queen will go up into the empty box above. In the meantime place the hive in which you wish to put the bees on the stand where the old hive stood, so as the field-bees which will be coming in all the time have a place to go. Of course they will be rushing in and out, not knowing what to make of it. Take the box of bees and dump them in front of the new hive, and they will soon run in and make themselves at home. Stand the old hive in a new location, and drum out again in 21 days. Put these bees into a new hive, or add them to the old colony, as you prefer. If one desires two colonies from the one, it is best to let the old box-hive colony cast a swarm first, then drum in 21 days, and the one drumming will be all that is necessary.

Still another way, which is better and less work than either of the above methods if one wishes to keep the whole force together and get the most honey, is to take a movable-frame hive full of combs or foundation a week or two before swarming-time, and place under the box-hive, closing the entrance of the upper hive, and compelling the bees to go thru the new one. When honey begins to come in rapidly the bees will crowd the queen into the lower story, always putting the honey above the brood. When the queen is laying nicely in the lower story, put a queen-excluder between the two hives, and soon all the brood will be hatcht out above, and the combs will be filled with honey. It can then be taken off, the combs cut out, the honey extracted, the old combs melted into beeswax, and the old hive cut up into kindling-wood. I am trying some this way now, and find it the most satisfactory method of all, getting more honey and wax, and keeping down the increase.

The Philadelphia Convention of the United States Bee-Keepers' Association, as has been announced before, will be held Sept. 5, 6 and 7, 1899. Dr. A. B. Mason, the Secretary, sends the following information as to railroad rates, lodging, etc., which we are pleased to give a place in these columns:

Sta. B, Toledo, Ohio, June 26, 1899.

Mr. Editor:—I have been faithfully trying to get the railroad rates to the G. A. R. encampment at Philadelphia for the information of those bee-keepers who may wish to attend the convention of the United States Bee-Keepers' Association on the 5th, 6th and 7th of next September, and find that in the territory covered by the Central Passenger Association the rate will be one cent per mile each way, "with a minimum of $11 (except that the fare will not apply via Pittsburg, Pennsylvania road and Washington), but via Harrisburg direct," but the $11 rate will be waived where the current first-class one-way fare is less. In such cases the fare will be one cent per mile each way in the Central Passenger Association territory added to the authorized one-way fare for the round-trip from the nearest Trunk Line gateway (or station). Tickets for sale Sept. 1 to 4, inclusive.

The rate in the territory covered by the Trunk Line Association will be "one fare for the round trip with a minimum of $1.00, except that the fare from New York and Baltimore will be $3.00; from Washington $4.00; from Newark, N. J., $2.85; from Elizabeth, N. J., $2.75; and proportionately from intermediate points. One fare to New York plus $3.00 from points west of Binghamton and Syracuse via New York, going and returning same route." Tickets to be sold, and good going, Sept. 2 to 5, inclusive.

The Central Passenger Association territory includes that part of Canada lying south of a line running from Toronto nearly west to Lake Huron; the southern peninsula of Michigan, that part of Illinois lying east of a line running from East St. Louis to Chicago, including both of these cities; all of Indiana and Ohio; that portion of Pennsylvania lying west of the Allegheny River, and that part of New York lying west of a line from Salamanca to Buffalo.

The remainder of the United States lying east of the Mississippi River, and south of the Ohio River, and those portions of Pennsylvania and New York not in the Central Passenger territory above described, and all of New England, are in the Trunk Line Association territory.

In both the territories named above, "tickets will be good returning to Sept. 12, inclusive; except that by deposit of ticket with joint agent at Philadelphia, between Sept. 5 and 9, both dates inclusive, and on payment of a fee of 50 cents, return limit may be extended to Sept. 30, inclusive."

Rates have not yet been fixt by the Southwestern Passenger Bureau, and the Western Passenger Association, but both have promist to inform me as soon as announcement is made."

By inquiring of the station agent any one can readily learn the rate of fare.

Side trips to Washington, Richmond, Norfolk, Gettysburg, Antietam and other points of interest will be provided for at about one fare for the round trip, or a cent and a half per mile for circuitous routes.

In a letter just received from Mr. F. Hahman, secretary of the Philadelphia Bee-Keepers' Association, he writes in substance:

"If those expecting to attend the convention will write me we will find quarters for them; those not notifying us will have to take their chances, as we cannot engage rooms for anybody except those we are sure will come."

Let me suggest that all such as desire entertainment write Mr. Hahman *at once*, or as soon as they have decided to attend the convention, so as to be sure and *reach him* by Aug. 15 or 20, and tell him what you wish provided. Mr. Hahman's address is Harrowgate Lane, Sta. F., Philadelphia, Pa.

The Philadelphia Association proposes to find good lodging-places for all who notify Mr. Hahman, and breakfast at the lodging-places if possible; and dinner and supper can be had at some of the numerous restaurants near the place of holding the convention, which will be in Franklin Institute, at 15 South 7th Street, between Market and Chestnut Streets. A. B. Mason, *Secretary*.

Why Not Just Double

The List of Subscribers to the Old American Bee Journal?

We really believe that if **ALL** the present readers of the American Bee Journal were so inclined, they could help to double its regular list of subscribers before August 1, 1899—or during the next 5 or 6 weeks. We do not find any fault with what our subscribers have done in the past toward increasing the list of Bee Journal readers—for they have done nobly—but why couldn't the doubling of the list be accomplisht within the next month? We surely think it could be done, and in order that it may be easier for those who help in it, we will make a **SPECIAL NEW SUBSCRIPTION OFFER**, and also pay all who will aid in securing new subscribers. Here is the offer:

Six Months for 40 Cents to a New Subscriber....

Yes, we will send the American Bee Journal **EVERY WEEK** from July 1, 1899, to Jan. 1, 1900—26 numbers for only 40 cents, to a **NEW** subscriber. In addition to this we will send to the present regular subscribers, for the work of getting new 6-months' readers, their choice of the premiums mentioned below, but no premium will also be given to any new subscriber on these offers, under any circumstance:

For Sending 1 New 40-cent Subscriber——Your choice of one of the following list:

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For Sending 2 New 40-cent Subscribers——Your choice of one of the following list:

Dr. Howard on Foul Brood.
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Pierce's Winter Problem in Bee-Keeping.
Bees and Honey (160 pages, paper) by Newman.
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30 copies York's Honey Almanac.

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Reared from the best 3-band honey-gatherers by Doolittle's method. Prices—45 cents each; ½ dozen, $2.50; one dozen, $4.50. SAFE ARRIVAL.

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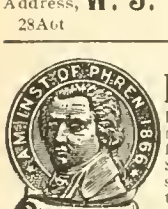

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Institute of Phrenology,
Pres. MRS. CHARLOTTE FOWLER WELLS, incorporated in 1866, opens its next session on Sept. 5, 1899. For prospectus send (free on application) to the Secretary, care of

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QUEENS! QUEENS! QUEENS!
Untested Italian, 60 cts. each; ½ dozen, $3.00. Satisfaction guaranteed.

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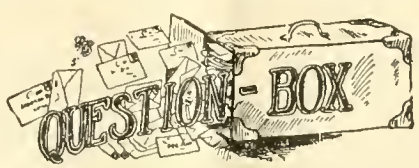

In the multitude of counsellors there is safety.—Prov. 11-14.

Amount of Drone-Comb in a Large vs. a Small Brood-Chamber.

Query 96.—Will there be more drone-comb when a very large brood-chamber is used than in a small one? My experience says there will be more, after one season's trial.—ILLINOIS.

A. F. Brown—Yes.
E. Whitcomb—Yes.
Dr. A. B. Mason—Yes.
O. O. Poppleton—I think so.
Mrs. A. J. Barber—I think so.
Prof. A. J. Cook—I do not think so. It

A RARE CHANCE

to purchase an apiary of 200 colonies of Italian and Carniolan Bees in 10-frame Langstroth and Dovetailed hives. The hives are two-story with 10 brood and 8 extracting-frames in top story, all wired for extracting. Combs are straight and in fine condition; last year's crop of honey was over 700 gallons from 150 colonies.

Purchaser can occupy the present good and convenient location of two acres, well shaded, with a comfortable residence for a family, for $10.00 per month, within 100 yards of fast line of electric cars that go thru main part of New Orleans every 5 minutes. Mail service twice a day. Poultry-houses and yards at cost of wire-netting in fences, and some fine poultry for sale; also furniture in house.

All must be sold, and location abandoned on account of poor health. All honey, poultry and eggs can be sold in city home market at good prices. Correspondence solicited.

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Queens Untested Italian, 50c each; Tested, $1.00 each. Queens large, yellow, and prolific. Address,
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8Atf (Successor to THEODORE BENDER.)

Root's Column

GLEANINGS AT REDUCED RATES....

We do not need to tell you about our journal, for it will speak for itself; but as an extra inducement we make the following low offers:

Offer No. A.

For 25 cents we will send GLEANINGS IN BEE-CULTURE from the time your subscription is received until January, 1900. If you send in your order promptly you will get 6 months for only 25 cents.

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For $1.00 we will send an untested Italian Queen worth 75 cts. and GLEANINGS IN BEE-CULTURE one year.

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For 50 cents we will send GLEANINGS IN BEE-CULTURE 6 months beginning July 1 and Vol. I of Gleanings. This is for the year 1873. There are many interesting things. There are 12 articles on "Starting an Apiary," and while some of these may not be practical now, there is much valuable information and it gives a good idea of bee-keeping at that time. Our supply is limited and of course we cannot continue this offer long.

Old as well as new subscribers may take advantage of these offers, but all arrearages on back subscriptions must first be paid at $1.00 per year.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

depends upon the proportion of bees to the space, and general thrift.

W. G. Larrabee—I don't know.

R. C. Aikin—Yes, on an average.

C. H. Dibbern—Perhaps, but I see no good reason for it.

Mrs. L. Harrison—I never experimented along that line.

Dr. C. C. Miller—Generally, yes. Properly managed, no.

J. A. Green—I think there will be a little tendency that way.

J. A. Stone—No more in proportion to the size of the hive.

E. France—I guess there would, but I would use the big hive.

Dr. J. P. H. Brown—Yes, in the majority of cases there will be more.

Emerson T. Abbott—Yes; this is a self-evident fact, it seems to me.

Rev. M. Mahin—In the brood-chamber, yes; and I judge in the super, also.

Mrs. J. M. Null—Yes, as a rule; but with young queens but little drone-comb is built.

Eugene Secor—I have not observed anything corresponding with your experience.

R. L. Taylor—Yes, from the nature of things, not only more, but more in proportion.

P. H. Elwood—You are right—more worker-comb, too. But more drone, relatively.

J. M. Hambaugh—I think not. Use full sheets of worker foundation, and obviate this difficulty.

G. M. Doolittle—No, if you *fill* the frames with comb foundation of worker size. Yes, if you use only starters in the frames.

J. E. Pond—I think the experience of the "querist" will be found to be that of nearly all the apiarists in the country.

C. Davenport—My experience has been that there will, as a rule, but it largely depends upon conditions. I have had colonies build about half drone-comb in 8-frame hives.

Adrian Getaz—If both colonies are of the same size there will be more drone comb in the larger brood-chamber. The larger the colony is in proportion to the brood-nest, the less drone-comb will be built.

D. W. Heise—Yes, if the colony is given the whole brood chamber when hived, without full sheets of foundation, honey coming in freely, and the queen should happen not to be a very prolific one.

Chas. Dadant & Son—If there is more, take it out. The quantity of drone-comb built depends on the prolificness of the queen at the time when comb is built. A prolific queen will obtain a greater quantity of worker-comb.

E. S Lovesy—My experience is that this question is governed more by the habits of the bees than by the size of the hive. When I find a colony exhibiting a penchant for building drone comb, I aim to keep it from being in or near the brood-nest, and if I find unnecessary drone-brood I remove it from the hive.

G. W. Demaree—In the brood-"nest" proper, the age of the mother of the colony has more than any other factor to do with the amount of drone-comb built by the bees. Hive two swarms on half-inch starters, let the one colony have a young queen, and the other a very old queen; now watch the results, and your question will be answered without regard to size of hive.

Queens! Queens!

If you want good queues, try mine. They are strictly pure Italians, and are all purely mated. My strain of Italians are unequaled as honey-gatherers, and have no superior. Untested Queens, 75 cents each; Tested, $1.00; Select Tested, $1.50.

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	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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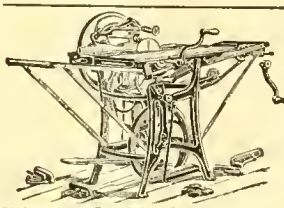
IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queens, $3.00 each; the same with untested Queens, $2.25. Correspondence solicited.

MATE WILLIAMS,
26A4t NIMROD, Wadena County, MINN.
Please mention Bee Journal when writing.



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9A26t **J. D. GIVENS, LISBON, TEX.**
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J. M. Jenkins, Wetumpka, Ala.

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GENERAL ITEMS

Bees Doing Fairly Well.

My bees are storing linden honey and have been for one week. They are progressing tolerably well with their work, having sealed some honey. They could have done more if the weather had been warm instead of cool. The sourwood furnisht bloom for two weeks before the linden came, but the bees stored only a limited quantity of honey from the sourwood. There is a good supply of linden bloom, which will be over by July 15. I am somewhat hopeful for a summer harvest.

JOHN M. RYAN.

Marshall Co., Ala., June 27.

Extracting Clover and Basswood.

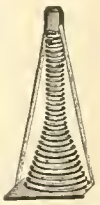
My bees have stored quite a reasonable amount of clover and basswood honey. I am extracting it now, and have been for two weeks. The white honey-flow is now closing. At this date last season the bees did not have, in the whole hive, five pounds of honey; now the hives are full of honey.

D. A. CADWALLADER.

Randolph Co., Ill., June 25.

Ants in Texas.

On page 386, Prof. Cook gives some very interesting points about ants. He speaks of the agricultural ant of Texas clearing the ground, sowing and reaping. Now, I believe he is mistaken, or misinformed, for I have been all over Texas, and if there was such a thing I surely would have heard of it. It is true there is a large red ant—perhaps the kind he has reference to—that col-



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Please mention Bee Journal when writing.

lects grains of wheat, oats, etc., also mounds about their entrances. We are bothered here in parts of Texas very badly with small red ants; they get into the hives, bore holes in the cappings of the brood, and kill it. We lost several colonies this way while in Lampasas county. We also lost several fine queens, by leaving them where the ants could get to them. They seemed to sting the queens, but didn't bother the workers. Even here, where there are hardly any ants, we have to be careful about our queens, the ants seeming to bother them more than anything else about the bees.

H. H. HYDE.

Williamson Co., Texas, June 25.

Very Little Swarming.

Here it is the last of June and I have not had a swarm from my 80 colonies, and but very little honey as yet. There have not been 50 swarms out of over 3,000 colonies in Otero county, and the loss was from 10 to 70 percent last winter. F. W. CHUK.

Otero Co., Colo., June 27.

Good Prospect for Fall Honey.

The white clover was winter-killed here and our bees have to be fed yet. The prospect for fall honey is good, as so far we have had lots of rain. CHAS. BLACKBURN.

Buchanan Co., Iowa, July 1.

Good Weather Needed.

Basswood, buckbush, and white sweet clover began blooming the first of this week, and the bees are very busy, and in good shape to store honey, if the weather man will give us better weather than we have had for the past two months.

W. S. YEATON.

Woodbury Co., Iowa, June 30.

Doing Well on Clover and Basswood

Bees are doing well on clover and basswood. If we only had lots of strong colonies I think we would get some honey, as they have been doing well the last few days. ARTHUR STANLEY.

Lee Co., Ill., June 29.

Not a Prosperous Season.

Last winter was a very severe one here, and was hard on the bees. Some bee-keepers lost all. I lost about 20 or 30 colonies out of 100. So far they do not seem to be doing much. I do not look for a very prosperous season for honey. WM. AIKEN.

Ontario, Canada, June 28.

Bee-Hunting—Information Wanted.

I am seeking information on the line of hunting wild bees. Mine having joined the majority in this section the past winter, I would like to find some wild ones to stock up with again, as those that have any left hold them "out o'sight" as regards price.

There are some wild ones here now in the timber, for I found a colony about two weeks ago, and more are going to the woods, as I have heard of two colonies that were seen to go already. At this season of the year they will not work on honey scarcely at all, and it is impossible to get any lines that way. If a bee is caught in a box she will probably fill up on the honey, and when you let her go she whirls around so much that one loses sight of her, and she fails to return at all, or, if she does, it is to buzz around a little and then go into the flowers.

Is there a bait on which bees will work when flowers are plenty? If any one knows of any he will confer a favor by making it known. I would like a plan for finding bees in June, July and August

Among the readers of the American Bee Journal there must be many bee-hunters that can give the best method for hunting at this season of the year. To look over all the timber here would be impossible. There

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail, $1.50
Doctor	3½ in. stove.	Doz.	9.00;	" 1.10
Conqueror	3-in. stove.	Doz.	6.50;	" 1.00
Large	2½-in. stove.	Doz.	5.00;	" .90
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Little Wonder (weight 10 ounces)	2-in. stove.	Doz.	4.50;	" .60
Honey-Knife		Doz.	6.00;	" .80

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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12 untested Queens	6.00
1 tested Queen	.80
6 tested Queens	4.00
1 selected tested Queen	1.00

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Offer No. 2. Send us ONE new subscriber for the Bee Journal for a year (at $1.00,) and we will order the Farm Journal for you for 5 years as a premium.

Offer No. 3. Or, send TWO new subscribers for the Bee Journal for the balance of this year at 60 cents each, and we will order the Farm Journal for you for 5 years as a premium.

Better apply soon, as we have only a limited number of 5-year FARM JOURNAL subscriptions to offer. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

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are some tame bees scattered all thru the country. I have tried the "stink bait" of corncobs and wine, but that is not satisfactory, as some of the time they will not touch it at all. I would like to find them as soon as possible, so that I can save the bees to stock up my apiary again. I have been quite successful in hunting bees in the fall after frost, but at this season of the year it is quite different, so I come to the readers of the American Bee Journal to help me out. L. J. CLARK.

Winona Co., Minn.

[If any of our readers can help Mr. Clark, we would be pleased to publish it.—ED.]

Floods in Texas—Much Damage.

We have had, I think, at least 18 to 24 inches of rainfall since Tuesday, June 27. Wagon-roads are entirely impassable for vehicles; railroads, culverts and fills are washt out, and the roadbed entirely gone in many places in the creek and river bottoms. I had 60 odd nuclei 18 miles from here on the river bottom; I am satisfied that they are gone, but I can't get there nor hear from there. I have had no mail for two days; trains can't possibly get over the road before Sunday. It still looks like more rain—nothing to equal this in 32 years, so the oldest settlers say. Some think the creeks and rivers are higher now than then. E. R. JONES.

Milam Co., Tex., June 30.

July 4, 2 p.m.—No trains since June 28th. It is reported that the trains will get thru this afternoon. The Brazos River is higher than the *oldest* settlers ever saw it. Reports say that the town of Calvert is in the water, and Hearne is *just* out of water, the breakwater from the two rivers (Big and Little Brazos) meeting *just* outside of town. Undoubtedly many lives are lost, but we can only guess yet to what extent. Vehicles, farming implements, stock and household goods of all kinds have been coming down Little River and the Brazos for four or five days. Farms in the bottoms are all the way from 4 to 15 feet under water *now*, and have been for four days. E. R. J.

P. S.—See our convention notice below.

Convention Notice.

Texas.—The Central Texas Bee-Keepers' Association will meet July 20 and 21, 1899, at Milano, Texas. On account of this meeting I have received a rate of one and one-third fares for the round trip on the certificate plan from all points in Texas, on the lines of the following railroads: G. C. & S. F.; I. & G. N.; H. & T. C.; M. K. & T.; Ft. W. & R. G.; the Southern Pacific, and the Cotton Belt. Don't forget to tell the ticket agent where you are going, and take his receipt showing that you have paid full fare to Milano. If you cannot get a thru ticket to Milano, take a receipt wherever you buy a ticket, showing that you have paid full fare. A cordial invitation is extended to all bee-keepers. Remember there will be no hotel bills to pay.

E. R. JONES, Com. on Program.

BEES FOR SALE

I will sell to make room, 200 COLONIES OF BEES in my non-swarming, migratory hives. Address,
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We are overstockt on 12-pound and 24-pound single-tier shipping-cases; also 1-gal. Tin Cans, and ½-pound, 1-pound and 2-pound Glass Honey-Jars (Muth's); also Novice No. 5 and Cowan No. 15 Extractors for 2 Langstroth frames. We will make FIRE SALE PRICES to move above stock. GET OUR PRICES AT ONCE, as they won't last long at the figures we will offer them at.

Standard Lumber Co.,
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Or, Manual of the Apiary,

—BY—

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I am running 800 nuclei, and can send Queens by RETURN MAIL. I have no 3-banded queens, and no 3-banded drones in my apiary. Am making a specialty of rearing the 5-banded strain this season. My 5-banders are working on red clover. Queens are reared by Doolittle's method. I insure safe arrival of queens. This is a post-office money order office. Address your orders to

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EXTRACTED HONEY

We are now in shape to buy Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank — The Brighton German Bank Co. (both of Cincinnati, O.)

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 8.—Not any of the new comb from other than the Southern States has appeared on our market; most of that is amber to dark, and hence sells at an average of 8@10c. New white that would grade choice to fancy would sell at 13c; off grades of white, 11@12c. Extracted, white, 7@7½c; ambers, 6@7c. Beeswax, 26@27. R. A. BURNETT & CO.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & CO.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices; Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.
HILDRETH & SEGELKEN.

SAN FRANCISCO, June 21.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Values for new crop comb and extracted are ruling much the same as lately current for old, but demand is not active at full figures, large dealers deeming these prices too high for round lots.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & CO.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

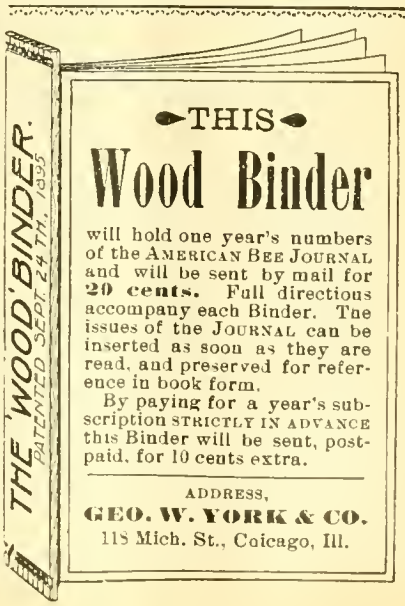
The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.
BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.
BATTERSON & CO.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it. PEYCKE BROS.

DETROIT, April 10.—Fancy white, 12c; No. 1, 10@11c; dark and amber, 8@9c. Extracted in fair demand without change in price. Beeswax, 25@26½.

Decreasing demand and the attempt to crowd sales have forced down prices on comb honey.
M. H. HUNT.



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To say to the readers of the BEE JOURNAL that

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has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
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12 Untested Queens	8.00
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Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

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Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
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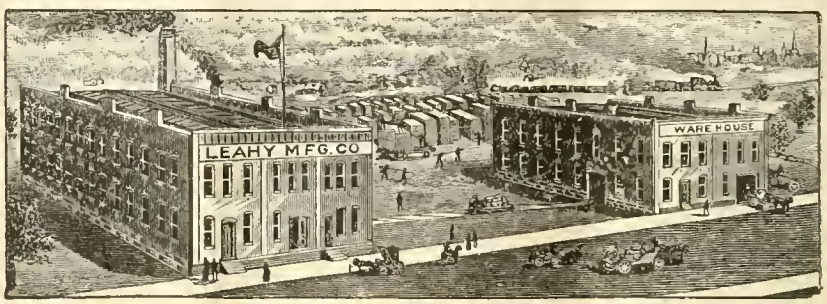

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QUEENS. Tested Italian, $1.00 each; 3 for $2.50. These are ALL YELLOW and their bees are "hustlers."

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JULY 20, 1899. No. 29.

BIOGRAPHICAL.

Miss Pickard and Her Apiary.

Miss Ada L. Pickard, who is shown herewith in her apiary, resides in Richland Co., Wis., and is one of the few lady bee-keepers who is making a wonderful success in her chosen field. We are glad to be permitted to place before our readers not only the picture, but also the following few words from Miss Pickard about herself and her work with the bees:

When I was a small girl my mother purchast Mr. S. I. Freeborn's apiary, numbering 160 colonies, which he placed upon our farm in Richland County during the summer of 1887. She being very much interested in the work succeeded in interesting me during the vacations. I always workt with her until the spring of 1898, when we moved 100 colonies about 12 miles from home, and I took charge of the apiary having sole management of it, and securing, as the result of my labors, 16,000 pounds of fine basswood honey. The picture represents me in my apiary last summer.

When fall came, we removed our bees home and placed them in winter quarters. Having excellent success in wintering, we moved 111 colonies to the place where I now am, and we are awaiting the results. The prospects are very good for a crop of honey this year, as the basswood trees are hanging loaded with bloom.

Miss Ada L. Pickard and Apiary—Richland Co., Wisconsin.

We trust that this short account may prove an inspiration to other daughters of our readers. They may not be able to "go and do likewise" to the extent which Miss Pickard has attained, but in all probability they might be very successful in their efforts along the bee-keeping line.

We regret that Miss Pickard didn't go a little more into the details regarding herself and her work, but as we hinted when writing her that she need not give any clew to her age, we presume she felt excused from giving many other interesting particulars as well.

In the last report issued by the Wisconsin Farmers' Institutes, we find the following from Miss Pickard's pen, being a portion of an entertaining contribution, entitled, "The Importance and Development of Bee-Culture:"

THE BEE-MASTER, PROGRESS IN BEE-KEEPING, ETC.

To be a thoro bee-master requires as much intelligence, forethought, and skill, as to be a good lawyer, physician, or any other professional, and withal a clear perception of the relation of cause and effect. Some people are inclined to think that bee-keeping is a pleasant pastime which lazy and incompetent people can take up with success, thinking all that is required is to put bees into a hive in some out-of-the-way place, and that they will "work for nothing and board themselves." And so they may, but if the owner desires to obtain any surplus for his own table, or for the market, he must give them further care, and unless

he has a heart for the work, so that he finds some degree of pleasure in caring for them, he had better not attempt to keep them at all, as they will only prove a source of annoyance without profit.

To make a successful bee-keeper requires a special gift, or a natural aptness for the business, the faculty of perceiving what needs to be done, and an inclination to do it promptly. The old Spanish adage, "Never to do anything to-day which can be put off until to-morrow," does not apply to bee keeping, as it savors too much of slothfulness; but the old Anglo-Saxon maxim, "Never leave until to-morrow what can well be done to-day," will be found more applicable, being much more in harmony with the assiduous activity of the bees.

We are living in a progressive age. No other period in the world's history has ever been signalized by such wonderful developments in science and art as has been brought to light this 19th century. The great labyrinth of Nature's mysteries has seemed to be set open unto men, and forces and principles which have lain dormant since the beginning of the creation, have in our day been brought forth and made subservient to the will of man with astonishing results. And while such unparalleled progress has been made in other directions, bee-keeping has also received its share of attention, and I feel quite safe in saying that more progress has been made in the management of bees, during the latter part of this century, than during all the thousands of years of previous history.

Bee-keeping in its present stage of development is fully entitled to take rank as one of the arts, and were it not for the variableness of the seasons, the changeableness of the weather, and other atmospheric conditions upon which the secretion of nectar in the flowers is so largely dependent, and upon which hinges the turning-point of success or failure, all of which are entirely beyond our control—I say, were it not for these uncertainties, then bee-keeping might properly be clast as a science; but inasmuch as the variation of seasons necessitates a variation in management of the bees, therefore no set rules can be establisht which will work satisfactorily under all circumstances that may arise; but, the judgment and skill of the apiarist needs to be constantly exercised in order to discover just what needs to be done, and when and how to do it.

Altho the manipulations of an apiary are widely different from farm work, as the practice of medicine is different from the practice of law, yet a few bees in the neighborhood are a real benefit to every farmer or fruit-grower, because the bees evidently perform a very important part in the fertilization of the blossoms of fruit and seed bearing trees and plants. Therefore, let the farmer, fruit-grower, and bee-keeper, live in harmony and good-will, for that which promotes the interest of one, promotes the interest of all. Give the bees a chance. ADA L. PICKARD.

Dead Brood—Kingbirds—Honey-Dew.

BY PROF. A. J. COOK.

IT will be remembered that in 1894 there was much complaint of dead brood in the apiaries of Southern California. The present season shows the same condition again. I have received samples from nearly every section of Southern California within the past few weeks, always attended with the inquiry, "Is it foul brood"?

This dead brood is not at all like foul brood, and any one who attends to the following description carefully, will have no difficulty in distinguishing the one from the other: In this case, the characteristic, most disagreeable, *odor* of foul brood is wholly wanting; the sunken cell-cap, with its frequent perforation, is also absent. The dead brood is always in the form of larvæ, and never in the sticky, pasty, unctuous mass so characteristic of foul brood. We insert a pin and draw a decaying larva from the cell, and it is not a stringy or ropy substance which springs back when it lets go the pinhead, as is true of foul brood, on the whole, yet it often appears coffee-colored or a rich, dark brown, as does foul brood. The surest way to tell is in the character of the decaying substance in the cell. If the larva is always found, showing the form even in its decay, instead of the stringy, elastic, pasty mass, then it is not foul brood.

I had a good deal of this in my hives in 1894, but I found it only in colonies in a starving condition, and as soon as I fed the bees properly the trouble disappeared. I have recently examined several colonies, where there is abundance of honey and pollen in the hive, and I found no sign of the disease. I believe it comes from some condition which kills the larvæ. I have pretty good reason to think that this is usually lack of stores. If it is sometimes present with abundance of food, as is reported by some of our good authorities, then it must be some other cause that brings death to the brood. Once dead, natural decay commences. The number of dead bees is not usually sufficient to produce any serious stench about the hive.

I suggest to all who are disturbed with this dead brood, to feed the bees, or see that they have plenty of honey, and I predict that their experience will be like mine in 1894—the trouble will disappear.

It is significant that we hear nothing of this trouble in good seasons, and, so far as I have observed, see it only in apiaries where stores are very short in the hives. Nearly all who have sent me this dead brood this year, have stated that the bees are very short of honey.

THE KINGBIRDS.

There are two birds in the United States that kill bees, both workers and drones, and I feel sure that they would not hesitate to take the finest queen should opportunity offer. The birds are wholly insectivorous. They belong to the family Tyrannidæ, which also includes the common, well-known pewee. Both, or possibly all three, species belong to the genus Tyrannus. They are all known as kingbirds, bee-martins, or tyrant fly-catchers. The Eastern one is Tyrannus tyrannus, while the one here in Southern California is Tyrannus serticalis. Another species I have taken here is T. vociferans. The Eastern one is dark ash, almost black, while the California species are ashy with yellow bellies. All have a characteristic red patch on the crown of the head.

I was interested in the account in the last American Bee Journal of these birds. We have found them here right at the apiary, and I have seen them dart down to the hives. They were taken, their stomachs examined, and no bees found, but, instead, the robber-flies, which are among the worst bee-enemies we have. So about here, I feel confident that they are more friends than enemies, even of the bees. Yet I know from actual examination that the Eastern kingbird does upon occasion take bees, and workers at that. I presume the California species may rarely do the same thing, tho none of those killed here have shown any bees in the stomach. Robber-flies, cut-worms, grubs and locusts have been found abundantly in their stomachs. Even granting that they do levy occasionally on the apiary, they take without doubt a score of harmful insects to one bee.

I should like to know how they manage the stings when they kill worker-bees. If they swallow the bees instanter, they must be stung, as the bee is too quick with its defense-organ to permit escape. I have taken five stings from the throat of a toad that had taken five worker-bees just before. We can believe a tough, non-sensitive toad might wink at such misfortune, but the more sensitive kingbird, we should think, would wince, and feel the pain acutely. Can it be possible that they have some way of avoiding the sting? I hope any who have opportunity will observe on this point. I should like to receive stomach and head and throat of a kingbird that had been really taken after eating worker-bees.

HONEY-DEW—ITS ORIGIN.

I am surprised at Mr. McKnight's article critique in the Bee-Keepers' Review, of my position regarding honey-dew. I did not suppose I needed to prove that honey-dew was generally from plant-lice (aphides) or scale (not scab) insects (coccids). We have only to observe to see the exudation and fall of the nectar from the insects. Whatever may be the ultimate truth, this is certainly true: Nearly all such honey-dew is from insects, as any one will see upon superficial examination. Very little, if any, is secreted by the plants, and none at all falls from the sky. Mr. M.'s suggestion that the plant forms the honey-dew, and the insects (plant lice and scale insects) sip it up, can be refuted by a very little close observation. We see the nectar coming from these insects, but we never see them sipping it up,

for the very good reason that they do not do it, no more than do bees pierce sound fruit.

I wish any one who finds what they think is plant-secreted honey-dew would send me a sample of the plant with the honey-dew on it. Claremont, Calif., June 4.

Are Italian Bees Yellow or Maroon?

BY DR. C. C. MILLER.

A "STRAY STRAW" in Gleanings in Bee-Culture for July 1, reads as follows:

"G. M. Doolittle says, in American Bee Journal, 'I never saw a single worker-bee from an imported queen that had any *yellow* on it at all. The color was always a maroon, chestnut, or leather color, not yellow.' My imported queens, or those that I bought for imported, have always had workers that I called yellow. Now the question is, Have I been swindled, or has some one been working off maroon bees instead of yellow on Doolittle? I don't believe I ever saw a dozen imported Italian queens, and I doubt whether Doolittle has seen many more than I, for I've been buying since he thought no more importations were needed, and at Medina you've had perhaps more imported queens than at any other place. Please tell us, are the workers of an imported Italian queen yellow or maroon?"

Editor Root, in his foot-note to the above "Straw," says this:

"I do not know where Mr. Doolittle gets his notion of colors; but if he will consult his good wife I feel sure he will have to revise his idea somewhat. I do not think I am boasting when I say that I have seen perhaps 50 imported queens where Doolittle or yourself have seen one; for we import from 50 to 75 every year. Years ago, as you say, Doolittle went on record as saying that he believed further importation was unnecessary, so I take it he has not seen an imported queen for some time. The color-bands, both on bees and queens, are what are generally called 'leather' color. I never saw one queen or bee direct from Italy that had bands that were either chestnut or maroon. Maroon? my, oh my! what's the matter with Doolittle's eyes? To my notion these colors are the same as those given in the Standard Dictionary, the latest and best in the English language, under the heading of 'Spectrum.' Strictly speaking, the yellow on the Italians is not exactly yellow, but leather-colored; but when we use the term 'yellow' we usually mean it in the broadest sense, and that may mean from a leather color to a lemon yellow. To say that Italian queens and bees do not have any yellow on them is to pervert the word from its ordinary accepted meaning. We say that the sun rises in the morning. While the statement is not correct, the phrase has an accepted meaning: in the same way, yellow, when applied to Italians, conveys an impression to the average person that is not misleading."

I have no extended remark to make, but I trust Mr. Doolittle will gratify my curiosity by answering a question. I don't remember ever seeing Italian bees called maroon until the present, and there was nothing original in my calling them yellow. Now, Mr. Doolittle, if you knew them to be maroon, while all the authorities, the books, and the bee-journals, were calling them yellow these years and years, will you be kind enough to tell us why you never mentioned it before? McHenry Co., Ill.

Riding Hogs'-Backs—Southern California Apiarian Conditions and Prospects.

BY "THE RAMBLER."

THE above seems to be a sort of an undignified performance for the Rambler, and, indeed, it would be, under the common interpretation of the words. But when we speak of hogs'-backs in this country, there is a variety to select from, and even the most dignified man might mount one of them without so much as ruffling the frills of his dignity.

It is now mid-day, and hot as fury in the sun, and I am sitting in a chair and leaning against a California walnut tree and enjoying its shade. The bees in the apiary close by are humming a hot-weather tune. In yonder clump of bushes a mourning-dove is cooing to its mate, a mocking-bird is shouting and whistling in a sycamore tree, and a blue-jay is trying to be neighborly by picking the crumbs from my table which stands in the open air. To my left, a canyon leads off to the west; to the front a larger one leads off to the north, and this is subdivided into many other smaller ones. As a consequence of the division of the land into so many canyons or ravines, there are a great number of ridges between them, some of them are quite sharp, with hardly enough room for a person to walk. These ridges are called "hog-backs," and when we explore these mountains it is always much more comfortable traveling on the hog-back than it is in the depths of the canyon, for there we find all manner of underbrush and obstacles.

This has been a sort of an alas season for California bee-keepers; our bees are making a precarious living, and one after another of our hopes of a honey crop have been blasted. We hoped for a yield of honey from the sage, which was in profuse bloom, but the fogs from Old Ocean kept hanging over us with their cooling influence until the bloom past, and then when the sun did exercise its prerogative of shining it was too late for the bees to get any honey.

Sumac is now coming into bloom, and our hopes are reviving again, for the buds are set very plentiful, and the few that are out are immediately visited by the bees. Wishing to explore the extent of the sumac pasturage I set out one morning for that especial purpose. I followed up the larger canyon to the north, and in the lower depths of it, where there was much shade and moisture, the bees were at work upon the wild heliotrope. This is a valuable honey-plant, for it is a profuse bloomer, and holds its flowers for a long time. There is a good amount of pentstemon—a trailing shrub, and having brilliant scarlet flowers; the tubes of these flowers are too deep for the bees to reach the nectar below, but there is another variety with white blossoms that are the proper length for bees to find the nectar, and I have an idea that the propagation of this variety would be a good scheme for bee-keepers to undertake.

I now climb up an abrupt trail, taking hold of the bushes to aid, and soon find myself upon the lower end of a hog-back. The first thing that attracts my attention is a brilliant spike of white flowers, and I can now see dozens of them scattered over the sides of the mountain. They look like plumes, tho quite rigid against the influence of the wind. This is the yucca or Spanish bayonet, and I do not wish to get too near it for the needles with which the lower portion of the stalk is armed are not agreeable to run against. Some species of it are credited with secreting a large amount of honey, but these specimens, and especially in this dry season, have not a drop of honey in them, and the bees did not notice the pretty and fragrant flowers.

Wild buckwheat and deerweed, or commonly known as wild alfalfa, abounds more or less upon the mountainside, but the bees are shyly working it, which shows that there is but little honey in it.

I am now well up to the top of this hog-back, and before I cross over to another let me sit down here and rest, and take in the scenery. Looking to the southwest I have the Cahuenga valley before me; it has recently been shorn of its grain, and there is nothing but stubble-fields surrounding the buildings on these great ranches. A little later a vile weed—variously known as flea-weed and vinegar-weed, but the true name is "blue curls"—will come in quite plentifully. Bees gather much honey from this, and it is a very low grade of honey, but it will be welcome this year, for it is as good as any honey for the bees to winter upon.

Before the advent of the Anglo-Saxon with his enterprise, these valleys were the best bee-pasturage in California; the sage here found a depth of rich soil for its growth, and the plants were vigorous, and yielded a greater amount of honey than the plants which grow upon the barren hillsides. That was the condition of the honey-pasturage in the early days when Mr. Harbison came to this portion of California and obtained those wonderful yields of honey. Now, the bee-keeper is thrust back to the hills, and the valleys are under cultivation.

Beyond the valley is a broad expanse, and it looks like a vast blue plain, and sky and plain merge together in the far distant. With a glass to aid our vision the plain would appear to be greatly troubled, and white crests would roll over it. Why, certainly, I see what it is now, it is the grand Pacific Ocean. It is six miles from this point of vision.

A little to the south we see Catilina Island, 25 miles from shore. It was here that Mr. Wood, of Michigan, proposed to establish a queen-breeding station some years ago, but one of California's poor seasons nipt the enterprise in the bud. I do not have much faith in island-reared queens myself, for just as good queens are reared on the main land now. So many localities are so thoroly Italianized that the

isolation from other races is as thoro as tho the breeding-queens were on an island.

We will now cross over into Laurel canyon. Here is a deserted cabin, the window gone, and the door hanging by one hinge. From the number of old, rusty tin cans around the door it is a deserted bee-ranch, and weeds are growing where the hives once stood.

Laurel canyon is inhabited to a certain extent, and here we run against a Chinaman's ranch. It is neat and clean, and with an infinite amount of labor he is raising vegetables for the Los Angeles market; but there are no bees here, and there are but few Chinamen that take to bee-keeping.

Up another branch of Laurel canyon I find another deserted cabin. The failure of the owner to find water led him to abandon it, and it is even more deserted than the bee-ranch below. The building is more or less a wreck. But here I find something that pays me for all my climbing—here in a secluded place is a bush in full bloom, and the bees literally cover it; hundreds of bees are on the flowers of this one bush. The flowers are in clusters, very small, and greenish white. It is the California coffee. The only one I ever saw previous to this was when I first came to California, and near the home of Mr. Arundell, of Fillmore. I think it is a rare shrub, and it is doubtful if any one knows the quality of honey the bees secure from it, but the fact that bees work upon it with such vigor in a dry season proves it worthy of a closer acquaintance and propagation. The gum-tree is receiving much attention as a honey-producer, why not include the coffee-shrub?

I am on another hog-back now, and our journey is homeward. But, look out! Whi-r-r-r-r! That is a rattler; hit him with a club! There, he is done for now. Take his rattles for a trophy. Two before this have been killed this year within half a stone's throw of my apiary.

I am now on the spur of the mountain above the buzzard's roost, and can look down upon the apiary, and a very good appearance it makes. The shade and the little tent look very inviting, and after a few minutes scramble downward we have made the circle of several hog-backs, and are at home again. I found acres of sumac, and wherever it was coming into bloom the bees were present. This gave me encouragement that some honey would be gathered from it. Honey-plants of all kinds, in order to make them do their best at honey-secretion, need the moisture below as well as above. Only about ten inches of rain in two years leaves the conditions below very dry, and while we live in hopes for some honey in the immediate future, our hopes are mostly stayed upon the glorious rains that will come to refresh the plants for another year.

Los Angeles Co., Calif., July 3.

The Bee-Hive or the Man—Which?

BY G. M. DOOLITTLE.

A CORRESPONDENT wishes to know if he had not better change the hives (Langstroth) he is using for the Hoffman, and gives the reason for thinking of such change, that he is informed that the Hoffman hive will give more honey than any other hive in the world. And this is only a sample of many letters which I receive, and from such letters it would appear that many think, to procure the *best* hive—a *hive* which will give "*big results*"—is all one has to do to reap a rich reward, with a few bees in such a hive. I have reason to believe, from the letters of the past, that thousands believe that all one has to do is to procure a Langstroth, Gallup, Heddon, Quinby, Hoffman, Danzenbaker, or some other highly-recommended hive to meet with *certain success* in apiculture; no matter how little thought is given to the field, location, or securing the bees in time for the honey harvest, or how poorly attended to, if we have only a good hive we certainly shall have honey!

From the many failures in the bee-business, and the shipwreck ending in disaster of so many who started out joyously when embarking in the business, it would seem as if they depended simply on using, or having in their apiary, *good hives*. While a good hive has very much to do with the results of bee-keeping, the *man* has *much more* to do with success or failure, so far as dollars and cents are concerned.

Does a man buy a choice lot of Jersey cows, put them in a lot enclosed with a beautiful fence, with a nice watering-trough, painted off in ornamental fashion, and then leave them to take care of themselves, expecting a large profit from them? No. The man spares no pains in caring for and milking them, and gives them every chance in his power which will tend toward success, realizing that upon *himself* lies the element of success or failure with those cows. Yet, ten to one, this same individual, or many very similar to him, will expect a large income from the same number of colonies of bees if they only have them in good hives, no matter whether they do anything for them once in three months or not.

The *idea* that "bees work for nothing and board themselves" must be banisht from our thoughts before we secure much profit from them, and yet this very idea seems to take possession of very many when they embark in the bee-business. *Work*, for a man with brains enough to know that he must leave no stone unturned that tends toward success, is what *successful* bee-keeping means. A good hive in the hands of such a man is a power which can be used to roll up tons of honey, and show to the masses of the people that there is money in the bee-business. *Such* a man will have his bees in readiness for the honey harvest whether that harvest comes from white clover, basswood, or fall flowers, and such an one will do things in just the right time to secure the best results.

I am often askt, "What advantage has a movable-frame hive over a box-hive?" *Much*, every way, in the hands of a skillful apiarist, but none at all with the man who does not take advantage of its principles, or of the benefits derived by a judicious use of the same, such as knowing in the spring that each colony has sufficient stores to last till the flowers bloom, or in the fall that it has plenty of stores for winter, or that each colony has a good, prolific queen, or giving stores to the needy by taking them from those having an abundance, etc. What are the movable frames good for if not for the above purposes? And yet we have those all over the world who do not take a frame out of a hive once in a year, yet call themselves bee-keepers, and wonder why they do not succeed in securing as much profit from their bees as do some of their more successful neighbors! They have the same hives—that they made sure of at the start. They are like some persons I know of who, when askt how the bees are prospering, say, "Pretty well, I guess; they were about as heavy as I could carry when I last lifted them;" and upon being askt when that was we were informed that it was on some cool day in early spring when there was no danger from stings. If a hive is only *heavy*, that seems to be all that is needed to insure a *good* crop where the bees are in *good* hives, for these persons do not believe in "fussing" with bees as some do!

Thus we find plenty of bee-keepers, or those calling themselves such, all over the country. Is it any wonder that we have so many ready to tell us in a few years after they start in the business, that "bee-keeping does not pay?" These persons do not seem to realize that it is just this "fussing," as they call it, which makes the success of the prosperous ones.

I do not want it understood from the above that I think that a person is to be continually overhauling hives that they may be successful. Those who have read my writings in the American Bee Journal during the past know that such is not the case. No, not that. What I mean is, that when a *gain* is to be made by looking inside of a hive, *do it*, and do it at *just the time it will be to our best advantage*.

Attend to the bees in the spring in *just* the *right* time; put on the sections at the right time; see that all colonies have good, prolific queens at the time such prolificness is needed the most; and so on with all the work in and about the apiary. Do not keep more colonies of bees than you can care for, and have everything done in good order. Better results can be secured from 50 colonies properly attended to than with 150 colonies left to themselves.

Just what I wish to impress on the mind of every one who reads this article is this: That a thoro, practical apiarist will succeed with almost any of the frame hives now in use, while a careless, "go-as-you-please" person will not pay expenses with the best hive ever invented; and it is for the reader of this to know to which of these classes he or she belongs. If to the latter class, one of two mottos should be written in great big letters and placed where it can be seen at all times: "REFORM, or "BETTER GO OUT OF THE BUSINESS." Onondaga Co., N. Y.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

THE OLD HOME VS. THE NEW.

How much nicer the old home of Cyula Linswik is than the new one! Pages 353 and 354. So much of our progress on earth, in some mysterious way, seems to lose for us more than it gains. When the Kingdom comes on earth I reckon people will live half the time in little booths made of the branches of trees. (In Eden they had absolutely nothing at all for house—blue sky for one royal tent—and life one endless childhood). Upon the advent of *sin* it was that God in mercy allowed us to load ourselves up with labor-compelling humbugs, to keep us out of mischief.

And how mad I was to find out, for the first time, that Cyula Linswik is not a real name—folks who live in glass houses have such an itch to throw stones.

A SERMON CRITIC CRITICISED.

Mr. Whitney, in criticising the sermon of Mr. Tichenor, rather gets into the familiar role of "sinful scoffer." That sermon, however, is open to criticism, and would be a good one for somebody to criticise in a spirit of friendliness, and of love for the actual truth, no matter who gets pinched by it. Page 355. A farmer near me began bee-keeping recently. His cash expense was, I think, two or three dollars (instead of the Whitney minimum of $10). Got quite a bit of surplus honey the next season—crosswise of the sections—and didn't take it off till the following June. That loss balance of $3,240,000 would simmer somewhat, I imagine, if adjusted to actual experiences.

"WILL I BE MIST WHEN I AM GONE?"

In my own familiar nest, page 356, I see—"*Mist* him that time." The meaning of that looks rather mist-y.—When I am dead and gone shall I be *mist?* Rather too ambiguous logically, and theologically.

KNOWING EACH COLONY IN THE APIARY.

That good husband, on page 357, I am at a loss to know whether he needs a club, or a bottle of the "Balm of Sympathy." Does he pocket the profits of his wife's apiary? or does she instantly spend 'em for a new hat, and leave him to buy the apiary supplies? The most startling thing in Mrs. Stow's essay is the assertion that the bee-keeper should know every colony as he knows his own family. Pretty lofty target for us to aim at. Not necessary to suppose that she herself fully reaches it. Those who call our attention to high ideals *without* fully reaching them serve us a good term, sometimes.

DRONE-REARING IN CONNECTION WITH QUEEN-REARING.

I note that the excellent queen-rearing article of John Bodenschatz, page 358, follows the old regulation scheme of providing choice drones—a scheme rotten and self-defeating, it seems to me. "Suppress the drones of the non-approved colonies (yet they *will* rear a few and *pamper* them), and cause the approved colony to rear hundreds of extra drones—with the inevitable result that they will be shabbily treated at home, and not one of them will be on time at the vital moment till a better groomed male has "got there." Worse than waste of time to stimulate drone-rearing beyond the bees' own inclination, unless we are also willing to take the time to secure the young drones homes, a few in a place, in colonies having few or none. Bee-keepers are keen-witted in most things, why can't they have common-sense in this matter?

GERMAN-ITALIAN BEES FOR COMB HONEY.

There must be something still much to be desired in our craft when both the Bee-Keepers' Review and Gleanings in Bee-Culture can soberly countenance putting on extracting-supers, and then taking them off to put on sections. All this to get bees *started* above. A good strain of German-Italian hybrids will start at once (when there is any surplus coming) with no more inducement than a couple of bait sections. Why not keep just such bees, if comb honey is what you're after? Page 361.

HUMAN NATURE AND HONEY-DEW.

How much human nature there is in the D. M. R. clipping, page 366. Having satisfied himself that some honey-dew exudes directly from the leaf (as the editor of the British Bee Journal has announced himself satisfied) he now wants to put up $5.00 that there isn't any other kind.

NOTRE DAME DEVICE—HOUSE-APIARY KINK.

If I get the correct idea of the Notre Dame wintering device (page 369) it accomplishes nothing for the winter's good except to close the spaces at the ends of the frames—good as far as it goes, but hardly sufficient to account for such results as reported, one would think. The amount of difference we see between a box-hive and a good frame hive as to wintering helps us to a judgment in this direction. Probably excellence of packing and some other things contributed largely to the final result. It is certainly a remarkable result to realize 24 sections of surplus, with a total gain of 66 pounds May 6, on the north line of Indiana. The weights given indicate very large hives. Perchance we have rather a triumph of the large brood-chamber, kept so all the year round, than aught else. Note also that the one which last fall was 35 pounds hive, and 41 pounds contents by May 6, had regained the winter loss and 72 pounds more! One would almost suspect that these bees, unknown to their keeper, had had opportunities for wholesale robbery somewhere.

In the same article Mr. Chrysostom contributes one of the excellent little kinks which cost but little and amount to much. Attach to each corner of the octagon bee-house board projections, extending out three feet or so, making its horizontal section look like a paddle wheel. The effect of this is to isolate the colonies on one face from those on the adjoining faces.

FEARS TO COMMENCE COMMENTS.

Guess I'll skip the Doolittle article, on page 370—not by any means because unworthy of comment—but you see if Dr. Miller comments on his questioner, and Doolittle comments on Dr. Miller, and I comment on Doolittle, and the editor comments on me, we shall have a "House that Jack Built," or a "Kid that Wouldn't Go," or something.

Glad to hear that a quart of bees *can* be made to rear a good queen, however.

BARRELS VS. TIN CANS FOR HONEY.

On page 371, C. P. Dadant gives us a model article in defense of our gawky country cousin, the honey-barrel—fighting on the losing side, I reckon, but fights well. He didn't explain how a *glue-coated* barrel could have its staves spread and closed again and yet be as proof against honey-soaking as before. How easy it sounds to say, "Spread the staves a little and lift out the head!" and how provokingly stiff and contrary those staves can be when inexperience tries the spreading and lifting! After a long time spent in disagreeable skirmishing you'll forget and rest a portion of your weight on the head—down in she goes, ker-squsb! Still no peaceful solution arrives, nor will the head come out any better than before. Before you get it out and laid on the shelf it is in two pieces, and various little "do-funnies" the cooper put in shed out from between them. O, it can be done, but I don't like to do it.

That was a good shot at the 60-pound can—must be washt, and then it rusts inside. Very likely; but, then, original sin might tempt us to set it on a warm stove until dry as a toast. Some would doubtless rather empty one barrel than eight square cans; but I think they would mostly be persons accustomed to the former and not to the latter. That there is no taking out and putting back in the use of cans, is a strong point in their favor. Cans rather need a special heating arrangement to liquefy in them; while the barrel calls for kettle-room or pan-room enough to hold a barrel, and these pans or kettles would far better be water-jacketed. One set of utensils required is about a fair stand-off for the other, I take it. He was honest to tell us that we must not put the honey back hot if the barrel is used.

DYING YOUNG AFTER LIVING LONG.

And so Dr. Miller would die young, after having lived a good many years—pretty good ideal. Page 374. Still our efforts to *compel* our old and weary hearts to be lively about something, when they don't want to be, are oft a trifle sad. Doubtful if that is really the best way. Simple rest in the bosom of Him who hath eternal youthfulness may work better than forced skipping around. COGITATOR.

CONVENTION PROCEEDINGS

Report of the Chicago Bee-Keepers' Convention.

BY HERMAN F. MOORE.

THE fourth regular meeting of the Chicago Bee-Keepers' Association was held June 1, 1899. The attendance was small, considering that the secretary mailed about 250 invitations to bee-keepers in and near Chicago. Attention was called in the notice to a donation of $9.00 which the association had received. This sum was to be used in paying a year's dues for the first 18 bee-keepers joining after the receipt of the notice. In such a case, 50 cents from a new member pays two years' dues. Some new members were received at the meeting.

In spite of the small attendance, the discussions were very interesting, and participated in by all present.

The committee on resolutions reported for consideration a resolution inviting the United States Bee-Keepers' Association to meet in Chicago in 1900; a resolution urging all our members to join the United States Bee-Keepers' Association; a resolution thanking Mrs. Stow, Mr. York and Mr. Moore for their present of $9.00, and for the able manner in which they represented the bee-keepers before the United States food investigation committee. The said resolutions were all unanimously adopted.

The association discust at length the question of amending the constitution. The following amendments were proposed, and the secretary was instructed to give notice of the same to all members, according to the constitution:

Amendments: Strike out the clause which reads, "Only bee-keepers resident in Cook County are eligible to office."

Amend Art. III, making the membership fee $1.00.

Amend Art. VII, making times of meeting "first Thursday in April, and first Thursday in November."

Amend Art. V, changing word "December" to "November," for election of officers.

On motion, it was ordered that the September meeting be devoted to amending the constitution only.

"Our success in wintering" was now made the subject for discussion. All the members reported heavy losses, some more than half. Honey-dew stores seemed to be the cause in a number of cases.

Mr. George W. York addrest the meeting on the work of the Senate pure food committee. He was of the opinion that the information collected by it will be of the greatest benefit to bee-keepers everywhere.

Mr. Edward N. Eaton, a well known chemist and specialist in honey analysis and investigations, also addrest the association in an interesting and acceptable manner.

A paper was read by the secretary on current topics, and, on motion, it was ordered publisht.

The association then adjourned to the September meeting. HERMAN F. MOORE, *Sec.*

Mr. Moore on Current Bee-Topics.

Your secretary has been requested to address you on current topics of special interest to bee-keepers, and especially to our own Chicago Bee-Keepers' Association. This is the day of organizations (wisely or unwisely), and bee-keepers must organize, and, being organized, carry out the best and largest plans for their chosen vocation.

The pure food investigation recently had in our midst, by the United States Senate committee, must be productive of much good. The people will awake to the necessity of legislation that shall require truthful labels on all articles of food, and the absolute prohibition of injurious chemicals or adulterations. Doctors, chemists, pharmacists, merchants, manufacturers, apiarists, etc., one and all recommended the enactment of such a national law.

You will see at once the necessity for it, when told that the investigation showed a very large part of all pepper sold is ground buckwheat hulls; ginger is ground tarred rope; flour is ground stone and clay; powdered sugar is cornstarch; butter is tallow and lard; lard is cotton-seed oil and paraffine; horse-radish is turnips; and three-fourths of the alleged liquid honey on the retail market is composed partly of glucose.

John Ruskin says: "I know hardly anything more strange than that you recognize honesty in play, and you do not in work. In your lightest games you have always some one to see what you call fair-play. In boxing you must hit fair, in racing start fair. Your prize-fighter has some honor in him yet; and so have the men in the ring around him; they will judge him to lose the match by foul hitting. But your prize merchant gains the match by foul selling, and no one cries out against that. You drive a gambler out of the gambling-room who loads dice, but you leave a tradesman in flourishing business who loads scales! For, observe all dishonest dealing is loading scales. What does it matter whether I get short weight, adulterated substance or dishonest fabric? The fault in the fabric is incomparably the worse of the two. Give me short measure of food and I only lose by you; but give me adulterated food, and I die by you."

In the midst of all this pure-food agitation, we as bee-keepers, as representatives of a most honorable business, have a duty to perform both for our fellow apiarists and also for the general public—the consumers of our products.

Let us say that as for us, we henceforth set our faces, like flint, against the continuance of fraudulent adulteration of honey. Remember, that in this conflict with fraud and misrepresentation, the people are with us as a unit. The great people, the consumers of everything, are more suspicious than ever before of the food they are buying, and are firmly determined to know the real composition of everything they eat. This is only right and proper, for in many cases health, or even life itself, may be lost by inattention to these matters.

The United States Bee-Keepers' Association, with which most of you are perfectly familiar, has determined to stop all illegal adulteration, sophistication and substitution in the honey-business. This determination is most commendable, especially as we remember that half a million producers of honey and thirty-five million consumers of honey, as food and medicine, are directly interested in this question.

A very old saw runs: "Pay your money and take your choice," whereas too often people have paid their money for honey to find that the dealer had *chosen glucose for* them. The far-reaching effects of such a transaction may not be apparent to a careless observer. When a pound of unsatisfactory, fraudulent mixture is sold to a customer, a producer of pure honey has lost a sale of a pound of good honey. But more than this, the said customer, on finding his purchase unsatisfactory, at once objurgates all honey and honey-dealers, and eats no more honey in his family for a year. He would have purchast nine pounds more of good honey in the year; so that the sale of a pound of mixture (glucose and something else) has defrauded the honest apiarist out of the market for ten pounds of genuine honey. This is no fairy-tale. The writer can affirm the truth of the statement in the light of over ten years of close business relations with family consumers of real honey.

The United States Bee-Keepers' Association has now about 500 members. It is necessary that the number of members be increast to 1,000 before the aforementioned plans can be carried out to the fullest extent. It will cost much money and labor to prevent effectually the adulteration of honey. Many samples must be collected, many chemical analyses must be made and paid for, and the war against fraud must be carried on sternly for months, it may be years, before the enemy is finally beaten.

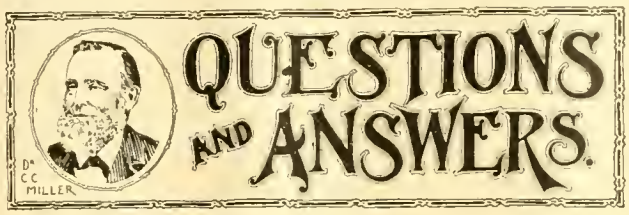
There is no way in which a dollar will go so far and do so much good as in paying a year's membership in the United States Bee-Keepers' Association—to Eugene Secor, Treasurer, Forest City, Iowa.

Certain amendments to our constitution have been recommended for our consideration by the executive committee. One makes any member residing in Cook County or not eligible to office, and another changes the annual fee to $1.00 a year. The executive committee realizes that in a great city like this, where both aims and expenses are high, the annual fee of $1.00 each will no more than suffice to pay necessary running expenses. If the annual dues could be made $5.00 instead of one, it would conduce greatly to sociability and the more effective protection of the interests of our members. An annual banquet and an annual picnic would be occasions of great pleasure to our members, and be the means of drawing tighter the fraternal bond.

It seems advisable for our association to extend an invitation to the United States Bee-Keepers' Association to hold their regular meeting in 1900 in Chicago. Their 1899 meeting will be held in Philadelphia, in September, which will, no doubt, be an occasion of much pleasure and profit to bee-keepers.

As citizens of Illinois, we rejoice that a pure-food law was enacted at the recent session of our legislature. This may be considered a step in advance, whatever may be the practical workings of the law. Tho much effort was made by a number of prominent bee-keepers of Illinois to procure the enactment of a foul brood law, it was unsuccessful.

It occurs to the writer that if the bee-keepers should ask to have as a clause, in a general law for their benefit, "funds for the enforcement and carrying out the purposes of this act shall be raised by a tax of five cents on each colony of bees within the State," such a law might easily pass. HERMAN F. MOORE.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Keeping Down Increase.

Replying to Rufus Williams (page 429), he is probably right in his suspicion that the outer hives get some of the bees that belong to the central ones. At different times I've seen such a thing reported, and especially in Germany where they move their colonies to the buckwheat fields. Placed in long rows, the end colonies become strong at the expense of the central ones. I think this is more likely to occur where the bees are placed in an open space with little to mark their location except the hives themselves. That makes an additional argument in favor of having hives under trees. Aside from the comfort of the shade for the bees, and especially for the operator, the trees give a chance to mark the locality of each hive so that bees are not likely to enter the wrong hives.

I would like to ask Mr. Williams if he doesn't find pollen in some sections by the plan he mentions on page 429. Also what proportion of his colonies swarm again.

C. C. MILLER.

Dividing a Colony.

I lost a swarm of bees last winter and I took your advice and put the hive under a strong colony, and it did not work just as I thought it would. So I come to you for advice again. When I examined the hive the queen had taken possession and it was full of brood, so fearing making a mistake I put it back again. The question is, How am I going to handle these hives? Will it be necessary to buy a queen? If so, when would be the best time to part the hive bodies? I took the frames out of the bottom hive but could not find the queen, but as I have not had much experience with bees I was afraid I would miss her. What do you think of this plan? Take out the bottom hive and put the top hive on the stand; take out the frames of the hive that was under, and brush the bees off from the frames in front of hive, and let them go into the one on the stand; then move the hive with all of the bees to another stand, and put the hive that was on the bottom on the old stand, then give them a new queen. If this plan will work, when would be the best time to do it? IOWA.

ANSWER.—You could hardly have had anything better than for the queen to go down and occupy the lower story with brood, for she wouldn't do that till it was full above, and without the lower story she would have been cramped for room. If you are working for extracted honey, there's no need to take away either story. Just put on the extracting-super as a third story, with an excluder under it, and you are all right. If you have only one size of frames, take one of the frames of honey from below and put in the third story to give the bees a start. If you think the queen will have enough room with one story, put an excluder between the two stories, putting all the brood in the lower story, and if there's too much brood to go into one story and you have no other use for the brood, then put in the upper story the brood that is most sealed. Be sure that the queen is in the lower story, and if you don't find her, after you have the excluder on the lower story, brush off in front of the entrance all the bees from the combs in the upper story.

If you are working for comb honey, it will hardly do to leave the two stories. Take away one story, filling into the story that is left all the brood you can. If there is a surplus of brood, you can use it for strengthening weaker colonies or any other purpose.

The plan you propose will work if you don't lose the new queen, but being inexperienced there is some danger you may not succeed in introducing her. You will probably have less trouble introducing if you leave the queen on the old stand, setting one story on a new stand, and giving it the new queen next day after making the change.

Laying Workers and Drone-Brood.

This is my first season with bees. I have nine colonies, most of them bought and moved the first week in May. Two swarms issued and got away a few days after being moved. Not being informed on what procedure to follow, without then knowing from which hives the absconding swarms issued, I went thru several hives and cut out all queen-cells. Two cells taken from one hive hatcht queens the same evening while I had them on the table examining them. A few days later I discovered the colony from which these cells were taken was queenless. It was very strong in numbers, the bees 3-banded Italians. Cells were cut out perhaps 15 days ago. Now I find some thousands of cells containing larvæ in all stages, some capt, and all new comb built drone-comb containing one to four eggs in each cell. I hookt over 400 larvæ out of cells, but the work being too slow I gave it up as a bad job. The bees have stored pollen liberally and some honey in the combs.

I have just secured a fine, young, supposed-to-be laying queen from a queen-breeder, and placed her under a cage about 3½x5½ inches on one of the combs containing hatching brood. Brood is hatching in her cage, and I placed some 30 just-hatcht bees with her under the cage. This is prest down tight on the comb so that no bees can get out or in, and I expect the old bees to accept the queen in two or three days.

Please advise what is the best course to pursue regarding the combs so filled with the larvæ of laying workers, for previous to the laying workers commencing laying I found there was not a larva or capt cell in the hive—this about the time I cut out queen-cells.

I have taken out the four combs containing the greatest amount of larvæ, and placed, with adhering bees, in an empty hive adjoining the bees' own hive, expecting the workers will leave the comb and go home, and that the laying workers will stay, and I can kill them. But there will be thousands of dead larvæ in the combs, and I dislike to waste the combs. Would the dead larvæ produce any disease if the combs were returned to the bees? or what is best to do? NEBRASKA.

ANSWER.—Take the combs of drone-brood and slice off the heads of the sealed brood with a sharp knife, dust fine salt on the unsealed brood, and distribute the combs to colonies having laying queens. They'll clean them out at a cheaper rate than you can. Don't be too much discouraged if you find your queen has not been kindly received, for bees with laying workers are inclined to be stubborn about accepting a queen. It is now believed that where laying workers are present they are present in large numbers, and perhaps they don't like the idea of giving up their job to some newcomer. As a general rule it doesn't pay to try to continue a colony that has laying workers. The workers are all pretty well advanced in age, and the best thing is to break up the colony and distribute combs and bees among other colonies.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

The Premiums offered on page 442 are well worth working for. Look at them.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JULY 20, 1899. NO. 29.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Introducing Queens.—Editor Hutchinson says a caution is needed in regard to introducing queens by the method described on page 435. "Don't use newly-built comb for caging the queen upon its surface, as the bees may burrow under the edge of the cage, and kill the queen. Such a case has been reported recently. Of course, this trouble might not happen once in fifty times, but it is just as well to use old comb and thus avoid this fiftieth time."

"The Honey-Bee: A Manual of Instruction in Apiculture, by Frank Benton, M. S., Assistant Entomologist," is the full title of Bulletin No. 1, New Series, issued by the Division of Entomology of the United Sates Department of Agriculture. We have just received a copy of the third edition, presumably thru the kindness of Mr. Benton, who, in the American Bee-Keeper for July, calls attention to some of the most important changes from former editions, in these paragraphs:

There have been slight changes made for this edition, only such as seemed quite necessary, as the pages were all stereotypt when first publisht. Chief among these is the change of the scientific name of the honey-bee, *Apis mellifica* to *Apis mellifera*, the older synonym, which, in accordance with the rules of zoological nomenclature, takes the precedence. As this name goes back to the tenth edition of Linnecus' "Systema Natura," 1757, there will not be a further change, but *Apis mellifera* will stand as *the* name. The change will be made wherever the name occurs in Bulletin No. 1. Two or three additions to the list of honey-plants are made, and several changes in dates of blooming in different localities. The following has been inserted on page 64:

"The great value of bees as cross fertilizers makes their destruction a serious injury to the interest of fruit-growers; therefore spraying with arsenicals during fruit-bloom should never be practiced. The injurious insects can be reacht quite as well before and after the blooming periods."

The Simmins non-swarming system is better elucidated by an added reference to the necessity of employing drawn combs in the super—a feature too often overlookt in connection with the method brought forward by Mr. Simmins, and yet one which is essential to its complete success.

This Bulletin No. 1 is intended for free distribution, but we understand that the edition issued July 1, and consisting of 1,000 copies, is practically exhausted already. In all now there have been 22,000 copies of the pamphlet publisht and sent out in the interest of apiculture. Applications for a copy can be made thru congressmen, or direct to the Department of Agriculture, Washington, D. C.

Sweet Clover a Help to Good Roads.—From the way in which sweet clover is so commonly cut down along the roadside while weeds of all kinds are allowed to grow, one would suppose that no weed can be so bad for the roads as sweet clover. C. H. Dibbern makes in Gleanings in Bee-Culture a revelation in this regard. So interesting and so important are the facts he gives that they warrant a very full quotation from him, as follows:

Last July, while driving in a distant township I struck a piece of road that was a pleasant surprise and a revelation to me. Evidently some bee-keeper must be road commissioner, or else he had learned something. Here, as in so many places in Illinois, the sweet clover was growing luxuriantly on both sides of the road. By running a mower up and down the road several times during the summer it had been kept from encroaching on the driveway. Not only that, but the cut clover had been thrown into the middle of the road; and how springy and delightful it all was! There was no dust, and the pleasant perfume of sweet clover filled the air. Some cattle in an adjacent pasture were reaching thru the wire fence and feeding on the clover within reach; and the bees were on hand by thousands, carrying away the nectar and filling the air with their contented hum. Soon I past into another township; and, tho the sweet clover had extended for miles further, it had all been cut and burned in the road, leaving a scene of desolation; and, oh, how dusty it was!

Again I past over this road in October. I had been wallowing thru the mud, and was weary enough, when I again experienced the pleasant sensation of my sweet-clover road. Instead of mud there was that springy road-bed, without mud or dust. Upon further investigation I found the sweet clover had all been cut when about done blooming, and carefully piled in the road where the sun had soon wilted it, and the wagon-wheels had crusht and mixt it with the soil. Tho this road ran thru a level, mucky country, it was the best road there was anywhere. The millions of decaying roots in the ground on either side seemed to provide a sort of natural drainage that seemed to carry off all surplus water. It appeared that no work with plow or grader had been done on it for several years, and only the intelligent care of the clover had done the business.

And so new values of sweet clover are being discovered all the time. But just read the following notice, which was issued by a thistle commissioner in Antioch, Ill., under date of June 26, 1899:

Notice is hereby given to all property owners in the town of Antioch, to cut all Canada thistle, *sweet clover*, and weeds to the center of the highway growing on their lands; also all other *noxious weeds* found growing upon their lands or upon the highways, before allowing same to mature seed. All persons failing to comply with this notice will be prosecuted under the statute made and provided.

THISTLE COMMISSIONER.

We have italicized some words in the above so that they will be particularly noticed. It will be seen that sweet clover is clast with noxious weeds, tho there is no law in

this State classing it, we believe. We would suggest that the bee-keepers in and around Antioch get after their "commissioner" with a big bunch of thistles and compel him to let sweet clover alone until he learns something about its many values.

Thursday, July 6, we took a bicycle ride some 30 miles northwest of Chicago, and the sweet clover was coming into bloom in immense quantities, and the bees were just roaring on it. But, actually, some ignoramuses who control the roads and the railroads in that region were mowing it down just as fast as they could. What a pity it was, to see all that fine stock feed and nectar for bees destroyed! If it must be mowed, why not wait until September, or later? Of course, by that time the seed will have matured and fallen on the ground to grow again, but what of that? If sweet clover were not growing there, doubtless some miserable weed would be, and is it not much better to have the rich, fragrant, nectar-laden sweet clover along the roadsides than ragweeds and other kinds of noxious weeds?

We do hope that our readers everywhere will inform themselves as to the varied values of sweet clover, and talk it *up* until its enemies cease to cut it *down*, and thus destroy one of the best plants our country affords—for stock pasturage, for bees, and, lastly, for the making of good roads, as Mr. Dibbern has shown.

Apis Dorsata in the United States.—An editorial in Gleanings in Bee-Culture is headed, "Apis Dorsata Here at Medina at Last; Giant Bees for Sale." The editor goes on to describe at length what beauties they are, each worker looking like a great, big yellow Italian queen, and after arousing to the highest notch the expectation of the would-be purchaser, he informs him that the bees will be sold, only one worker to each purchaser, at 10 cents each, *each worker being in a little bottle of alcohol.* Oh, Editor Root, how could you so trifle with one's feelings?

STENOG, in Gleanings in Bee-Culture for July 1, starts out his department with this rhythimical "pick:"

"Bring out your guns, all you that has 'em,
And blaze away with enthusiasm!
The basswoods now their nectar ooze,"
Says Drone, "and WE have not an hour to lose."

Just why the bees 'should bring out their "guns" instead of "honey-sacs," in which to collect the oozing nectar, we can't quite understand. But perhaps in Stenog's *locality* the bees use guns for that purpose.

* * * * *

MR. R. F. HOLTERMANN, editor of the Canadian Bee Journal, lost his little 6-year-old son Richard by very sudden death on June 12. We did not learn it until July 11—nearly one month later—or we would have announced it before in these columns. We are sure that our readers will join with us in extending to Mr. and Mrs. Holtermann sincerest sympathy in their great sorrow. Mr. Holtermann gives the following particulars in the July number of his paper:

"On Monday, June 12, after dinner, contrary to my usual practice, I remained at the house for some time. I felt like resting, and did what I do not remember of ever doing before at that hour of the day—I lay down in the hammock at the side of the house. Those who were at our house during the winter convention may remember the fair little boy, strong, and the picture of health. He came to me and I askt him if he wanted to go to a gospel meeting for children, and he said yes. We arranged that his older brother should take him on the wheel. Then he askt for the hoe, he wanted to plant some radish; not ten minutes after I heard him crying on the other side of the house. I did not go for almost a minute. When I did go, his mother was with him, and he said he had pains in his legs. In about a minute he had convulsions. I said he was poisoned. In response to a question he said he only had what we gave him for dinner. I jumpt on my wheel and in ten minutes or so had one doctor, and in a few minutes another, but all was over in about half an hour. There is no doubt it was sun-stroke, as he had no hat on his head."

* * * * *

MR. G. M. DOOLITTLE, of Onondaga Co., N. Y., writes us that, Providence permitting, he will be at the Philadelphia convention. A good many bee-keepers would be very glad to meet Mr. Doolittle, having read so much of his writings on bee-keeping.

* * * * *

MR. J. H. MARTIN, writing us from Los Angeles Co., Calif., July 3, had this to say about the discouraging conditions in Southern California:

"This is a season of utmost discouragement to bee-keepers here; there will be but little honey produced, and there will be a great loss of bees. Fifty percent died last year, and 50 percent, if not more, of the remainder will die this year. It will be some years before Southern California will recover from this disastrous condition of things."

* * * * *

MR. WM. A. SELSER, of Philadelphia, dropt in to see us, very unexpectedly, on Wednesday, July 12. Several years ago he called on us when passing thru Chicago, but, unfortunately, we were then out of the city, and mist seeing him. Mr. Selser is perhaps the largest bottler of pure honey in this country, having, we believe, disposed of some 30,000 pounds in that way thru grocers, in a single year. He is also an extensive bee-keeper, producing much of the honey which he sells.

Mr. Selser is expecting a large convention in Philadelphia, next September, when the bee-keepers "settle" there for a few days. He is an enthusiastic worker in the bee-industry, as well as a loyal and active Baptist in church matters. No doubt Dr. Mason (who is also a prominent member of the same denomination) will lay strong claim to Mr. Selser at the convention, but we'll try to do our part in seeing that the jovial Doctor don't monopolize him entirely.

* * * * *

MR. THOS. G. NEWMAN was given a call by "The Rambler," when the latter was in San Francisco, reference to which is thus made in Gleanings in Bee-Culture for July 1:

"I felt as tho it would not do to pass thru the city without shaking the hand of that stanch friend of the bee-keeping fraternity, Mr. Thos. G. Newman.

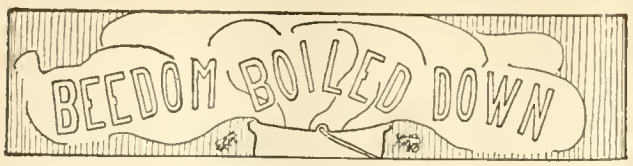
"Mr. Newman gave us a cordial greeting, but we were pained to find him in delicate health. When he first came to California he found an abiding-place in the extreme south, at San Diego. We were in hopes for a time that Los Angeles would become his permanent home, and there is not the least doubt in my mind but this city would have been the more healthful for him; but business matters necessitated the change to his present quarters.

Mr. Newman is an eminent spiritualist, publishes the Philosophical Journal, and but a few moments' conversation with him will demonstrate that he is a man who desires to benefit and elevate his fellowmen. He has been a faithful worker in the interests of bee-keepers, and there is no use to refer to the firmness of his backbone in reference to the affairs of the Bee-Keepers' Union."

It is now a little over seven years since Mr. Newman severed his connection with the American Bee Journal. For about 18 years previous to that time he had been its editor, and had carried it thru many trying years. While he never run the journal just for fun, it is true that he was, as The Rambler says, "a faithful worker in the interests of bee-keepers," unselfishly devoting his best efforts to the upbuilding and extension of the bee-industry.

When Mr. Newman purchast the American Bee Journal it was issued monthly, at $2.00 a year, and had about 800 subscribers, while to-day it is publisht weekly, at $1.00 a year, and has nearly ten times as many readers.

It will be noticed that before the reduction in price and change to a weekly, the Bee Journal cost its subscribers nearly 17 cents a copy; to-day it costs less than 2 cents. And yet some object to the present price; but such are not worthy of the name "bee-keeper."



Tin Cans versus Barrels.—Editor Hill, in the American Bee-Keeper, while conceding that others may use tin cans in preference to barrels, thinks it not amiss to say that he "has used a number of carloads of tin cans as a honey-package, and has found the percentage of loss thru leakage greater than where barrels are used."

Duff's Feeder is figured in "Alfalfa, Grasshoppers, Bees: their Relationship," and is very simple of construction. Take a two-inch soft white-pine plank large enough to cover the hive, bore it full of holes with a two-inch or smaller bit, letting the holes come not quite thru, except near the center where one or two may come clear thru to make passage for the bees. An upper story or a super is set over, thus protecting against outsiders.

Bees Consume More if Stores are Poor.—A Stray Straw in Gleanings in Bee-Culture says: "Do bees consume more stores when they have honey-dew? Some of mine starved with what I supposed were sufficient stores. [A few years ago, I believe, it was agreed that the bees would consume less good stores than of poor. Has there been anything to change that opinion? I do not remember.—ED.]"

Duff's T Super, as described in the bulletin of Kansas University, differs from the ordinary T super in the construction of its T tin. Instead of this being a piece of tin folded in the shape of a T, a straight piece of tin is nailed on a strip of wood. The wood is ⅜-inch thick, ¾-inch deep, and a little shorter than the inside width of the super. The tin is one-inch wide and ½-inch shorter than the wood, being nailed on the narrow edge of the wood. Thus the sections are held ⅜-inch apart by the wood, making less temptation for the bees to glue than when a narrow crack is left.

The U. S. Pure-Food Investigation is stirring things up lively at Chicago. Senators Mason and Harris and Prof. Wiley had Editor York on the stand for the greater part of one session, and he was well loaded with solid facts that were corroborated by H. F. Moore and Mrs. Stowe. The testimony will be printed in full in the report to Congress, and it will be nothing strange if some laws are enacted that will not make the way any smoother for adulterators. [The Pure-food Investigating Committee got hold of the right men; indeed, it could hardly have secured better ones. Let the good work go on.—ED.]—Gleanings in Bee-Culture.

Foul Brood has been considered in a series of able articles by Prof. Henry W. Brice, in the British Bee Journal, and his final considerations are as follows:

1. Post mortem examinations show clearly that bees and queens are affected with foul brood, and while this is so no cure can be effectual that confines its attention to *brood* alone.

2. The present methods of dealing with affected hives and appliances are decidedly faulty, and in a great measure useless.

3. That while comparatively easy to destroy the bacilli, it is next to impossible (in dealing with live bees and brood) to destroy the spores of *B. alvei* without injuring the bees, other than by the only safe method of causing them to germinate.

4. *B. alvei* in the rod form is capable of being effectually destroyed if the process is properly carried out.

5. Chemical agents and drugs to be effective must be persistently applied, and the treatment constant, for at least three generations of the worker-bees and brood reared during this period.

6. Seeing that queens are in nearly every case affected, no treatment can be satisfactory and complete until colonies are requeened from a perfectly healthy colony.

7. The only perfectly safe method I know of for treating hives in which bees suffering from foul brood have been kept is to paint these inside and out with two coats of good oil paint, rubbing the same into every crevice and corner, so as to stick down (as bees do with propolis) all spores beyond the possibility of their being ever again freed and finding a suitable medium for growth. It must be remembered that bacilli or germs of any kind are incapable of spreading beyond the frame in which they are isolated, whilst in a fluid state, unless carried to fresh pastures after contact with something else. Thus I contend that a spore stuck up against a hive wall in a sort of enameled case is practically sealed up, and impossible of removal under any ordinary circumstances.

8. Boiling is almost useless as at present carried out. In fact, I found it necessary to permit some time to elapse between successive boilings, to allow the spores to germinate between each operation. For this purpose a medium must be present of some kind, as without this even successive boiling of hives is mainly unsatisfactory.

9. In ordinary hands it is futile attempting to cure any but mild cases of the disease. It thus becomes both better and cheaper to destroy by burning. This may seem hard lines to some, but I feel convinced that in bad cases it is the only method worth consideration.

Queen-Breeding Delayed in the South.—Gleanings in Bee-Culture says: "Strangely enough, the queen-breeders of the South have this spring had almost no advantage over those of the North. During March and the forepart of April the weather was about as unfavorable for queen-rearing in the southern portions of our country as in the northern; and when the weather did open up warm and balmy, the queen-breeders in the North could begin just as soon. These thoughts came to me when we tried to get queens from the South this spring. The almost universal complaint seemed to be that the weather had been too unfavorable in the South.

Extra Honey Brings Extra Prices.—"Stenog" says in Gleanings in Bee-Culture that some remarkably fine honey was received by the A. I. Root Co. and offered at 20 cents per section of about 14 ounces (about 23 cents a pound.) It was all taken instantly, even at that price, and he thinks a large amount of such honey might be sold in the cities, to a certain class who care little what a thing costs so it suits them, at 40 cents a section. He adds: "Of course, not all can produce such honey, but so long as the poorest regulates the price of the best, just as the worst boy in school 'regulates' the morals of the rest, it behooves somebody to see that the poorer grades are improved."

Do Large Colonies Store More than Small Ones, in proportion to numbers? That's the question that is troubling two of our editors. Editor Hutchinson admits Editor Root's argument that a large colony can keep up the heat more economically, but thinks that rather an argument against large colonies, as the principal storing occurs when bees are driven out of the hive by the heat. To help settle the question, Editor Hutchinson, in the Bee-Keepers' Review, proposes experiments something like this:

"When two swarms unite in the air, hive one-third of the bees in one hive and two-thirds in another hive, giving each a queen. Some of these swarms should be hived on combs, some on foundation, and some on starters, and results carefully noted."

Queen-Cells—When Should they be Given?—G. M. Doolittle says in the American Bee-Keeper:

"If I attempt to give a queen-cell to a colony from which I have taken a queen, before they start cells from their own brood, as a rule, the cell will be destroyed. Hence if, at 24 hours after the removal of a queen, no cells are started with me, it is not safe to give a cell just ready to hatch, unless the cell is protected with a cell-protector. As looking over the combs to see just when cells are started is extra work, I now wait 48 hours, or use the cell-protector at 24 hours (generally the latter), and all works well. The West cell-protectors, which are the best in the market, can be bought of any supply-dealer, or any one can make protectors by rolling wirecloth around a properly-shaped stick so as to form a cage having an opening in one end as large as a lead-pencil, while the other end is large enough to admit the cell at the base. The ripe queen-cell is now slipt into the protector, and the large end secured so the bees cannot get at it, when the whole is put down between two combs, where it is left to hatch. As the bees always destroy a cell by biting into the side of it, this protects the cell so they cannot do this, yet allows the queen to come out at the lead-pencil hole."

Root's Column

GLEANINGS AT REDUCED RATES....

We do not need to tell you about our journal, for it will speak for itself; but as an extra inducement we make the following low offers:

Offer No. A.

For 25 cents we will send GLEANINGS IN BEE-CULTURE from the time your subscription is received until January, 1900. If you send in your order promptly you will get 6 months for only 25 cents.

Offer No. B.

For $1.00 we will send an untested Italian Queen worth 75 cts. and GLEANINGS IN BEE-CULTURE one year.

Offer No. C.

For $1.00 we will send GLEANINGS IN BEE-CULTURE the rest of this year and all of next year, that is, from the time your subscription is received until January, 1901. The sooner you take advantage of this offer, the more numbers you will receive.

Offer No. D.

For 50 cents we will send GLEANINGS IN BEE-CULTURE 6 months beginning July 1 and Vol. I of Gleanings. This is for the year 1873. There are many interesting things. There are 12 articles on "Starting an Apiary," and while some of these may not be practical now, there is much valuable information and it gives a good idea of bee-keeping at that time. Our supply is limited and of course we cannot continue this offer long.

Old as well as new subscribers may take advantage of these offers, but all arrearages on back subscriptions must first be paid at $1.00 per year.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

In the multitude of counsellors there is safety.—Prov. 11-14.

Which for Honey—Blacks or Italians?

Query 97.—If you wanted only honey and did not expect to sell queens or bees, would you change from blacks to Italians?—N. C.

E. France—No.

J. A. Green—Yes.

W. G. Larrabee—Yes.

Dr. A. B. Mason—Yes.

Mrs. A. J. Barber—Yes.

Mrs. L. Harrison—Certainly.

G. M. Doolittle—Yes, *yes*, YES.

J. A. Stone—Yes! by all means.

J. M. Hambaugh—Most assuredly.

Prof. A. J. Cook—I certainly should.

Chas. Dadant & Son—Yes, in any case.

Rev. M. Mahin—I most certainly would.

Dr. J. P. H. Brown—Yes, I would change.

P. H. Elwood—Not unless in a buckwheat section.

A. F. Brown—Yes, or at least to Italian-black crosses.

D. W. Heise—If I could make the change at a very small expense, yes.

R. C. Aikin—Yes. Italians are more pleasant to handle, not so wild, prettier.

Mrs. J. M. Null—Yes, always. On an average they are worth twice as much as blacks.

E. Whitcomb—Yes. It is as necessary to infuse new blood in the apiary as it is in the herd.

Eugene Secor—I think I would introduce enough Italian queens to at least hybridize the apiary.

C. H. Dibbern—Yes; the best bees are what we want for gentleness as well as honey-gathering qualities.

C. Davenport—For extracted honey I would; for comb honey, in my locality and with my management, I prefer blacks.

R. L. Taylor—I should not change to pure Italians, but I think some Italian blood in your blacks would be an improvement.

Dr. C. C. Miller—I want only honey, and do not sell queens or bees, and for many years I have worked to keep out black blood.

Adrian Getaz—It would depend upon how good the strain of blacks I might have would be. If satisfactory, I would not go to the expense of a change.

J. E. Pond—Yes, most certainly. Reasons in plenty could be given for this, and I know of no good reason for doing otherwise, at the present price of tested Italian queens.

O. O. Poppleton—My experience in Iowa, Florida and Cuba has shown me that this is a question of locality, but it is impossible to even skim the subject in the question column.

E. S. Lovesy—While I am not very anxious for the pure Italians, I would change from the blacks every time. The most unsatisfactory bee to me is the leather-colored hybrid.

Emerson T. Abbott—Not if I were contented with the blacks, but I do not like to handle them. The Italians will gather more honey, but the blacks will produce an article which will bring more in the market.

G. W. Demaree—I certainly would, in my locality. Italian bees protect their combs much better than do the black bees. A mere handful of Italian bees with a queen has been used in my apiary to protect a hive full of combs during the heated season. Black bees will retreat and yield before the moth until all is lost.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
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White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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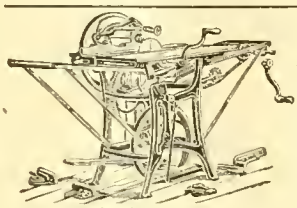
IF YOU want the best honey-gatherers, the longest-lived and hardiest Queens, try a few of my **Northern-bred Italians**—"daughters of imported Queens." Tested Queens, $1.50; untested, $1.00; 2-frame Nuclei with tested Queens, $3.00 each; the same with untested Queens, $2.25. Correspondence solicited.

MATE WILLIAMS,

26A4t NIMROD, Wadena County, MINN.

Please mention Bee Journal when writing.



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Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

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YOUR OPPORTUNITY!

We have arranged with a large bee-keeper in Cedar County, Iowa, to furnish ONE-FRAME NUCLEUS OF BEES WITH WARRANTED PURE ITALIAN QUEEN and ONE POUND OF PURE ITALIAN BEES—all for only $2.00; or in lots of five at $1.80 each. There are only 75 for sale. Better order quick if you want any. If more of the queens are wanted, these can be had at 75 cents. All queens reared by the Doolittle process.

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GENERAL ITEMS

Bees Doing Fairly Well.

Bees are doing fairly well in this locality. There is quite a crop of white clover, but not as profuse with honey as some seasons. I have 18 colonies, and have had no swarms as yet. FRANK RUFFNER.

Shelby Co., Ill., July 6.

The Bees Like a Dark Color.

MR. EDITOR:—You ask on page 425, "Who was it that said all colors look alike to bees, and that they would not sting dark objects any more than they would light ones?" Well, I didn't, but I stand ready to prove that my bees can be handled without the least trouble by a person drest from head to foot in black, without the least sign from them of annoyance, so far as color is concerned. In fact, I have had them out of the hives, the frames standing around me filled with bees, while thus drest, and all this without veil or smoke. One cannot do this with black bees. WM. M. WHITNEY.

Kankakee Co., Ill.

Poor Prospects for Honey.

This season we have not had one-half inch of rain for three months; everything is drying up. There is no white clover this season. I have 54 colonies of bees, and have had two new swarms. I have not taken one pound of honey in the sections yet. I have kept bees nine years, and this is the worst season I ever saw. I am afraid I will have to feed the bees for their winter supply.

Basswood is just coming into bloom, and that will be our only hope of any surplus.

Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Van Deusen Thin Foundation.

We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

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EXTRACTED HONEY

We are now in shape to buy Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank — The Brighton German Bank Co. (both of Cincinnati, O.)

27Atf Please mention the Bee Journal.

There is quite a good deal of sweet clover around here.

The bees were strong in the spring, and had lots of honey. They seem to be strong now, and ready for work, if there was any thing for them to do.

Last year I got about 1,600 pounds of honey. I sent a half ton to a man in Brooklyn, N.Y., for 12 cents a pound here. About 15 days after the shipment he made an assignment. I have never received one cent for any of it; so it will make two poor years for me—one by fraud and this season by the severe drouth.

There will not be any honey thru this section.

I think a good deal of the American Bee Journal. It comes to me regularly every Friday. I don't see how any bee-keeper can get along without it or some other bee-paper. I have learned one thing in the Bee Journal this season that was worth the year's subscription. GEO. H. ADKINS.

Essex Co., N. Y., July 1.

Not Much Surplus Honey.

June 1 we had from two to three inches of rain, so bees will live over in this vicinity. There will not be very much honey put on the market this season, and it will be about all consumed by the home market.

M. D. NICHOLS.

San Diego, Co., Calif., June 19.

Bees Not Doing Much.

It is cold to-day and no sight for bees. They have been working somewhat at basswood and other things, but I fear not much more than getting a living. E. E. HASTY.

Lucas Co., Ohio, July 8.

Very Disappointing Year.

We have had a very disappointing year with our bees—excessive cold in February and a continuous drought have ruined this year's honey-crop, except in a few favored locations. CLAUDE STERT.

Uvalde Co., Tex., July 1.

Honey Crop a Failure.

The honey crop is a failure in this section of our country. H. B. LAMBERT.

Simpson Co., Ky., July 8.

Not a Favorable Season.

We bee-keepers here in Christian County have had a very wet spring and early summer, and bees have not done very well. There is not more than one colony of bees here to where there were 10 five years ago. It seems as if we do not have the honey-flows we used to have. There was a good supply of white clover bloom, and the bees got enough to build up pretty well, but there was little swarming and no surplus to amount to much. There is now a good prospect for a fall crop of smartweed, if we have a season from now on. G. G. LARGE.

Christian Co., Ill., July 10.

Basswood Slighted by Bees.

I have bees, also a couple basswood trees which have bloomed this year for the first time. The blossoms on them are big, luscious and fragrant. The bees are not more than 50 feet away from the trees, and yet I have watcht and waited hoping to see those bees literally swarm over those inviting, waxy blossoms, but not a bee have I seen on them. I expected they would fall over each other in getting there—but not a fall.

Now, why was this thusly? Do you suppose that nectar was too rich for their aristocratic blood, or was it just a trick of theirs to deceive me? I even took a limb with a fine lot of blooms, and put it right in front of their hives. No, sir! they wouldn't have it.

Well, for the life of me, I don't know what those Italians of mine do feed on this year. The few heads of white clover in the

Shipping-Cases!

We are overstockt on 12-pound and 24-pound single-tier shipping-cases; also 1-gal. Tin Cans, and ½-pound, 1-pound and 2-pound Glass Honey-Jars (Muth's); also Novice No. 5 and Cowan No. 15 Extractors for 2 Langstroth frames. We will make **FIRE SALE PRICES** to move above stock. GET OUR PRICES AT ONCE, as they won't last long at the figures we will offer them at.

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Queens Untested Italian, 50c each; Tested, $1.00 each. Queens large, yellow, and prolific. Address,

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5-banded Untested, 60 cts. each; Tested, $1.00 each.
1-frame Nucleus.....$1.50
2-frame Nucleus..... 2.00
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each, with untested Queen.

I am running 800 nuclei, and can send Queens by RETURN MAIL. I have no 3-banded queens, and no 3-banded drones in my apiary. Am making a specialty of rearing the 5-banded strain this season. My 5-banders are working on red clover. Queens are reared by Doolittle's method. I insure safe arrival of queens. This is a post-office money order office. Address your orders to

Dan'l Wurth, Falmouth, Rush Co. Ind.

and receive fair treatment and prompt service. If you want 5-banded queens that are reared in a yard where there are no 3-banders, I am at your service. Parties wanting more than one queen will do well by writing for prices.

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(A heavier and stronger knife than the one we offered heretofore.)

(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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—AND—

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1 untested Queen	$ .60
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12 untested Queens	6.00
1 tested Queen	.80
6 tested Queens	4.00
1 selected tested Queen	1.00

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4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

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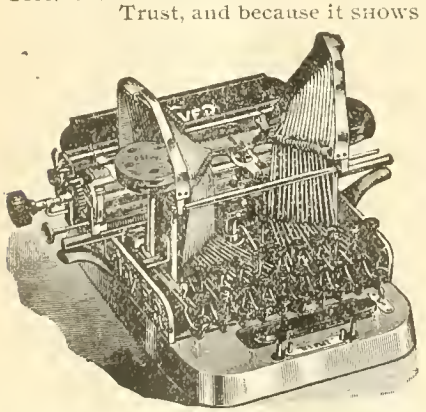

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yard seem no attraction for them. Indeed, I see them on nothing but the poppies, and they act as if they would devour every flower—roll and dive into the pollen like crazy things—but are shy of the many other flowers in the garden. Well, I don't complain. Guess they know their business. At all events they are multiplying and seemingly happy. I am wondering if they'll make me a nice lot of filled sections. No sign of it yet. DR. PEIRO.

Cook Co., Ill., July 6.

Bees Doing Well.

My bees are doing well on basswood and sweet clover JOSHUA YOUNG.

Erie Co., N. Y., July 7.

Bees Had a Hard Time.

The bees have had a hard time of it—almost continuous rain. I had very little surplus from our two spring honey-plants—salmonberry and vinemaple—just enough to feed back now. I lost one colony out of 30, but have increast now to 35.

HERMAN AHLERS.

Clatsop Co., Oreg., July 3.

White Clover Fails to Yield.

You can put me down for blasted hopes as far as honey is concerned this year. Clover fails to yield, tho pastures are white with it. Bees are just about holding their own. I am in hopes they will get enough to carry them thru till fall, as we generally get some honey from heart's-ease.

Henry Co., Ill., July 4. G. E. NELSON.

Keep Your Temper.

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(SEMI-MONTHLY).

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

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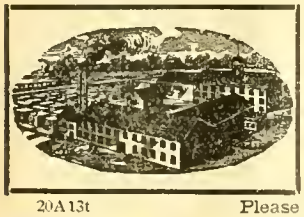

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 8.—Not any of the new comb from other than the Southern States has appeared on our market; most of that is amber to dark, and hence sells at an average of 8@10c. New white that would grade choice to fancy would sell at 13c; off grades of white, 11@12c. Extracted, white, 7@7½c; ambers, 6@7c. Beeswax, 26@27. R. A. BURNETT & Co.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & Co.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices; Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, July 5.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Market is firm at the quotations, with trading necessarily light, as only small quantities of new have so far arrived, and stocks of old are practically exhausted. It now looks as tho this year's yield would not come up to the smallest estimates.

CLEVELAND, March 9.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & Co.

OMAHA, June 2.—A few little lots of new honey from Texas have made their appearance on the market. The stock was put up by inexperienced people and only sold at moderate prices. Extracted of fairly good flavor brought 5½@6c. Comb honey put up in 60-gallon cans and filled with extracted sold at 6½c. This is a most undesirable way of packing comb honey. Trade does not care for it. PEYCKE BROS.

DETROIT, July 15.—No old honey to quote, and no new offered. Prices are liable to rule higher as crop is short. The abundance of rain will no doubt help the crop of fall honey. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

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will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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There are indications that the demand for SUPPLIES will be very large this seasou, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

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We make the New
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BEES **QUEENS**
Smokers, Sections, Comb Foundation
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To say to the readers of the BEE JOURNAL that

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has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
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Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

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Because it has always given better satisfaction than any other.
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We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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Portland Seed Co.....Portland, Oregon.	J. L. Gray .....St. Cloud, Minn.
E. T. Abbott, ...St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co. .....Sheboygan, Wis.
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Beeswax Wanted at all times.

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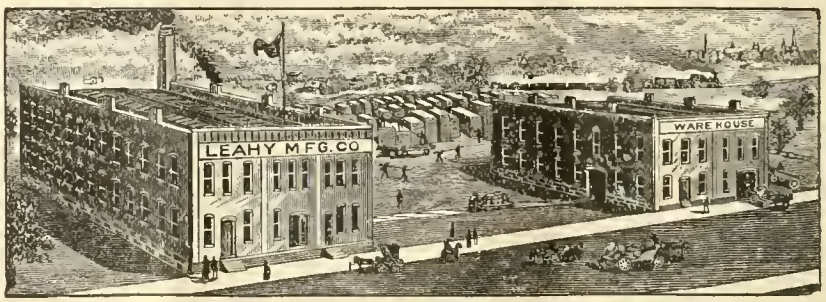

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404 Broadway, E. St. Louis, Ill.

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Our Cartons are of a good quality of cardboard, much better than is usually sold for honey-boxes: $4.50 a thousand; 5,000, $3.80 a thousand. Sample free.

We carry in stock a full line of **APIARIAN GOODS.**

ITALIAN QUEENS: Untested, 50 cents each; 3, $1.40; 6, $2.60. Tested, 90 cents each. Catalog free.

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24 cents Cash paid for Beeswax.

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118 Michigan Street, CHICAGO, ILL.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., JULY 27, 1899. No. 30.

BIOGRAPHICAL.

Three Generations of the Dadants.

BY THE EDITOR.

THE name of Chas. Dadant & Son is one too well known not only to all our readers, but to the whole world of bee-keepers, to need any words of introduction from us. However, it affords us considerable pleasure to be permitted to present on this page the pictures of a quintet of Dadants, and to give a little of their history.

C. P. Dadant. *Louis C.* *Maurice M.* *Henry C.* *Chas. Dadant.*

Mr. Chas. Dadant was born in a village of Champagne, in France, May 22, 1817. He kept bees in France for pleasure when a boy, and long ago told of his adventures in the bee-business, in the earliest numbers of the American Bee Journal. He came to America in 1863, with the intention of growing grapes, but the grape-growing business proving a comparative failure, he again turned his attention to the bees. With the help of a dictionary and a weekly American newspaper he managed to master the English language, so as to be able to understand it and write it very fluently, but he has never been able to speak it freely and master the pronunciation, and his enunciation is difficult, so much so that those who meet him for the first time often wonder whether this can be the same man who wielded so ready a pen in the defense of the large hive, of which he has been the main champion.

Among Mr. Dadant's achievements in behalf of bee-culture are most prominent his successful importations of queens from Italy in 1874–75, and his revision of that classic in bee-culture—"Langstroth on the Honey-Bee"—which he republisht in connection with his son in 1889, and of which a number of new editions have since been printed.

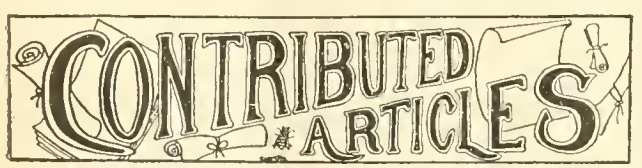
Altho Mr. Dadant is well known in this country, he is still better known in Europe as an extensive apiarist. His translation of the work of Langstroth, under the name of

"L'Abeille et la Ruche," which was also publisht in Russian, would have given him a leading place among European writers, if he had not already been known across the seas for his strenuous efforts during many years to extend the use of the movable-frame hive, and to fight the "routine" of the European peasants. How well success has crowned his efforts may be seen by perusing the bee-journals of France, Italy, Switzerland, Russia, and even of Spain, which also seems to be making an effort in the direction of progress. Even in the South American republics the echo of his voice has reverberated, and a step forward is being taken in the production of honey by progressive methods.

Altho Mr. Dadant is still the head of the well-known firm of Chas. Dadant & Son, he has practically retired from active life, but he keeps an eye on the current events of the bee-keeping world. His health is good in spite of his 82 years, yet he is annually compelled to leave home to avoid the hay-fever, to which he is subject during the months of August and September. He spends those two months every season in the pretty little town of Sturgeon Bay, Wis., in perfect immunity of this disagreeable disease.

Mr. C. P. Dadant, born in Langres, France, April 6, 1851, came to America with his father at the age of 12, and has resided in Illinois ever since. He is well known to our readers as one of our regular contributors, one of the directors of the United States Bee-Keepers' Association, and the manager of one of the most successful firms with whom our bee-keepers deal. Of his three sons, the eldest, Louis C., aged 20 years, is now a student of the Illinois State University, in the department of mechanical engineering. The second, Henry C., 17 years of age, has just graduated from the Keokuk high school, and is fitting himself for a business education. As to the third, Maurice M., he is yet too young to be able to say what he may be able to do; he has so far been trying his ability only in the rearing of Plymouth Rock chickens.

The Dadants manage six apiaries, comprising about 450 colonies, a large vineyard, and an extensive foundation-making shop. They produce extracted honey almost exclusively, and are among our most successful bee-keepers.



Several Delayed Questions and Their Answers.

BY G. M. DOOLITTLE.

SOME questions arrived along the latter part of the winter which the writer wisht answered thru the columns of the American Bee Journal, but in some way they got misplaced, so were not answered when they should have been. The writer of them is desirous that they be answered now, so that they may be in time for use when he wants to refer to them, and after hunting the matter up I have concluded to answer in July what would be more appropriate for December, altho it is generally best to answer questions, and give articles, which are appropriate for the time when they were written or appear in print.

LOCATING AN APIARY.

QUESTION.—Which is the better location for bees, one on low ground where it is moist and frosty in the spring, but sheltered, or one on high ground where it is more free from dampness and late frosts, but somewhat windy?

ANSWER.—If I could have my choice I would select neither. My choice would be midway on a moderate slope, say one inch to the foot, or such a matter, which faced toward the south, or more preferably the southeast. This would avoid the early spring frosts and the dampness of the low land, and, to a large extent, the high winds of the elevated position, which are almost sure to prevail. To be sure, a wind-break can be constructed around the apiary on the high ground, but according to my experience many bees are lost by being swept away on windy days upon rising above this enclosure into the cold blasts which blow above and about it, they being lured out by the calm and sunshine within. For this reason, were I limited to one of the two extremes, I would select the low ground in preference to the high. If bees go out from the warmth caused by the midday sun shining on this low ground, they are not liable to be lost thereby; for when they rise high enough to strike the cold air from above, they at once fall into the warm air below, thus immediately warming again, so are not lost. Then, on the whole, the temperature at the low location will average much the warmer in early spring.

However, as I said at the start, if it were possible I should avoid the two extremes in locating, and take an intermediate one. But where our environments are fixt so that we cannot have our choice in such matters, happy is that man or woman who can make these environments the most nearly accord with what a good location would give us.

FEEDING BEES IN WINTER AND SPRING.

QUESTION.—What is the best method of feeding a colony of bees that is found to be without food in the hive in midwinter or early spring?

ANSWER.—In the first place, we should never allow our bees to be in this condition, for it is much more to our advantage, and to the advantage of the bees, to have sufficient food supplied them in the fall to last at least till the last month of spring, and I am quite positive that if enough is given to last till June it is all the better. The prudent apiarist will look over all his colonies in October, and see that *all* are abundantly supplied till the flowers bloom again. However, should such a thing as the bees being short of stores happen, thru sickness or other adverse circumstances, the very best method of feeding them is to set in combs of sealed honey, as this places the bees in a natural condition, and does not disturb them every little while, as most other methods of feeding do. If no combs of honey can be had, the next best way is to fill combs with good, thick sugar syrup, when they are to be used the same way the combs of sealed honey would be. In either case, such combs of feed should be warmed for six hours or more before being placed in the hives, for where combs of frozen honey are set next to the bees the colony is thrown into a state of excitement to warm this honey up to where they can safely cluster against it.

There is still another way of feeding in winter which I like very well, and can be used still more effectively in the spring where a colony is short of stores, where one has on hand some extracted honey which has candied, which is as follows:

Make a bag out of cheese-cloth about six or eight inches square, after which partially fill it with the candied honey, which has previously been workt till it is quite soft, or it can be workt after it is in the bag. Don't fill the bag so but that it will assume a flat shape, for we wish to press it down right over the cluster of bees, so that it can be covered snugly with bee-quilts or old carpeting to keep in the heat. The bees will suck the feed thru, and in process of time cut thru the cloth so as to use it all up.

But let me repeat, that the bee-keeper who does not see that each colony has stores enough in the fall to last from October to May, is working in such a way that the word "failure" is liable sooner or later to be inscribed on his banner.

FALL AND SPRING WEIGHT OF COLONIES.

QUESTION.—What becomes of the difference between fall and spring weight of colonies, sometimes amounting to from 20 to 25 pounds?

ANSWER.—Bees use honey largely as fuel during the winter season, in order that they may not freeze during the frigid weather of our northern localities. I reason like this:

The natural food of the honey-bee contains the least possible amount of gross matter, and as bees do not take on fat and thereby increase in weight, the digestion of honey in the stomach of the bee is equivalent to combustion, or, in other words, the honey is burned up, hence as the ashes of burned fuel do not weigh anywhere near as much as the fuel did before burning, so the "ashes," or what is left in the intestines of the bees, weigh much less than did the honey consumed to keep up the fire.

Again, much of the weight goes out by evaporation; and should the bees have a flight, more would go out by way of excrement, but not nearly as much by the latter as by the former. Honey being very free from nitrogenous matter, it is past off in liquid or vaporous form by way of sensible and insensible perspiration and respiration, except the small amount to be found in the bodies of the bees. This is sometimes carried on to such an extent that water is seen running out at the entrance of hives in winter. Some of the food is also used in producing muscular force, and as this force is constantly wearing out, the loss is per-

ceptible in the food, while in the weight of the bees it is not seen.

In all of the above we see the wisdom of Him who created the bees, for were it otherwise they could not stand the rigors of our Northern latitudes at all, inasmuch as they are too clean to soil their hives, while the weather will not admit of their leaving them, often for months in succession.

Onondaga Co., N. Y.

Queen-Breeders Defended—Judging from the Progeny of a Queen.

BY J. M. DONALDSON.

HASTY judgment is a failing that mankind is more or less heir to, and bee-keepers not being exempt, the queen-breeders, like the supply and commission men, are often the victims. Sometimes it may be deserved, but I will venture to guess that nine times out of ten it is entirely uncalled for.

I do not put forward the claim that all queen-breeders are strictly honest. We have good and bad in almost any calling. No doubt there are a few men who rear queens for market that are careless and slipshod in their methods, their only aim being the accumulation of the almighty dollar; but of this I am not qualified to speak.

We have a class of queen-breeders who are careful and considerate—men who have devoted the best days of their lives to the study of the honey-bee, its habits, and the best methods for rearing queens. Such men are not only a credit but a benefit to the bee-keeping fraternity, because they are doing what the rank and file of bee-keepers have neither the time nor the patience to accomplish, namely, improving the present race of honey-bees by breeding out the poor qualities and breeding in the good ones. Men of this class could not afford to injure their reputation by misrepresenting their stock or by sending out poor queens. I do not think they would knowingly do so, still I have received queens from this very class of men that fell far short of *my* expectations, as far as egg-laying was concerned; but I do not think the one I bought them from was trying to swindle me.

I am thoroly convinced that a queen that has been very prolific while in the yard of the breeder may, after making a journey in the mails, turn out almost useless as an egg-layer. I never studied entomology, and cannot explain why this should be, but I will relate an experience I had, on which I base my opinion:

Three years ago I wanted to improve my stock, so I sent an order for a select-tested queen of the previous season's rearing. This order was placed with one of the best-known breeders. The queen arrived and was safely introduced. As this was the highest priced queen I had ever owned, I was much interested, and kept a close watch of her. I was somewhat disappointed when I found she was not keeping up the strength of the colony. But there were other things I noticed, which saved me from the common error of writing a saucy letter to the man from whom I bought her. Her progeny was as handsome as any bees I had ever seen, and in proportion to the number the hive contained they were the best hustlers in my yard. They were the first out in the morning and the last in at night. I concluded to try breeding from her before making any complaints; the result was as good queens as it had ever been my pleasure to own.

That season a friend of mine (who is also a bee-keeper) made me a visit. He took quite a fancy to my nice, yellow bees, and askt me if I would send him a queen. I pickt out one of the very best I owned, and sent her to him. Last summer my friend paid me another visit; of course I askt him how he liked the queen I sent him. Imagine my surprise when he told me that if he were buying them, he would not pay one dollar a dozen for queens such as she was.

From the above facts I came to the conclusion that when buying queens, should they not quite meet my expectations, I would always breed from them and see how their queen progeny turned out before I entered my complaints to the queen-breeder.

Worcester Co., Mass.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Foul Brood Germs—Difference Between Spores and Bacilli.

BY THOS. WM. COWAN.

SINCE I wrote to you on this subject I have received Gleanings in Bee-Culture for April 15, and in it I find two letters in reference to which I should like to make a few remarks. Mr. Harry S. Howe, writing with regard to the several boilings in order to secure the sterilization of honey, points out that "the spores of *Bacillus alvei* do not develop in honey, nor can they live in honey except in the spore condition." I would agree with this entirely if it were restricted to honey in a *normal* condition. But it would indeed be a bold person who would venture to say that honey is always in this state, and that it cannot be in such an abnormal condition as to form a suitable medium for the germination of spores of bacilli. We know the living spores remain dormant, and bacilli cannot grow in honey, because in a normal condition it has an acid reaction; but should it, from any cause, become even slightly alkaline, there would then—if other conditions obtained—be no hindrance to their germination and development. It was with a view to the possibility of such a condition that I wrote advisedly in my last letter respecting several boilings of honey—"*supposing* a nutrient medium to exist in the honey, the unaffected spores would germinate into bacilli, and could be destroyed in the next boiling."

On page 310, there is "A new treatment of foul brood" by our old friend Rambler, and a recommendation to uncap a comb affected with foul brood, and wash it under a faucet of water running with considerable force. I should like to point out the great danger of this plan. The combs that are uncapt contain thousands of spores; and in washing many of these would be driven out of the cells and spread by the running water, we know not where; and as they are not destroyed they are at any time ready to restart the mischief. When the combs are in this condition it is always safer to burn them, as we thus destroy all the spores.

Then as to formalin, I do not think it would have any more effect upon the spores than any of the other drugs have, altho it may be equally efficient in destroying bacilli. It seems to me that, in many cases, the non-success of drugs has been owing to not properly understanding the great difference between spores and bacilli.

Now, in any inquiry into the influence of one drug or another on micro-organisms, it is necessary to bear in mind that the influence of certain conditions on the micro-organism may be a twofold one. First, the condition may be unfavorable to the growth of the organism; and, second, the condition may be fatal to the life and existence of it. The second condition involves, *a fortiori*, the first; but the reverse is not the case. A great deal of confusion has arisen on this subject, owing to the failure to distinguish between these two propositions. We constantly hear of this or that substance being an "antiseptic," which means that it is inimical to the growth of micro-organisms, or that it is a "germicide," meaning that it kills the organisms. The scientific man, of course, knows and understands the difference between the two; but the great bulk of people do not, therefore they expect drugs to perform impossibilities.

I see Rambler calls formalin an antiseptic, therefore it is probable that it will prevent the growth of spores only while in contact with it, or kill the bacilli. This is precisely the behavior of all the other drugs used, and they can do no more. Spores are invested by a thick, double membrane; the external sheath is supposed to be cellulose, and the internal one probably of a fatty nature, both being bad conductors of heat. It is this double membrane that gives spores this great resistance of high and low temperatures to acids and other substances. I do not think any amount of soaking in water would render the spores open to the influence of diluted formalin. Now, we know there are many antiseptics, and these can be used effectually against foul brood. Carbolic acid, phenol, thymol, salicylic acid, naphthol beta, perchloride of mercury, and many other substances, even when considerably diluted, prevent the growth of bacilli.

Now we have had considerable success in England in our treatment of foul brood, which involves the use of drugs. We call this an antiseptic treatment, because it is the same in principle as the antiseptic treatment in surgery, which has made it possible to perform with success the marvelous operations of the present day, and such as could not have been effected without almost certain loss of life from blood-poisoning induced by the growth of various micro-organisms. We insist on an antiseptic always being present in the hive or in the food we give to our bees. No

syrup or honey is given without first being medicated, and the antiseptic used kills any bacillus that may be growing, or prevents the spore from germinating, altho it does not kill it.

Then we know that there are certain chemical substances which evaporate at the ordinary temperature of the hive, and whose vapors prevent the growth of bacilli, altho they do not destroy them. Among these are eucalyptus, carbolic acid, phenyle (or creolin), lysol, camphor, naphthalene, and others. For convenience and economy we use naphthalene, and have some of this always present in the hive. Our treatment is this:

If we detect the disease in its earliest stage, before any of the affected larvæ are capt over, we simply feed the bees with syrup medicated with naphthol beta, because at this stage there are no spores present. The medicated syrup is used by the nurse-bees in preparing food for the larvæ, and in this way the bacilli are destroyed. It is, however, seldom that the bee-keeper is sufficiently expert or alert to detect the disease at this stage, but more generally notices it only when the combs have irregular patches of brood, with sunken and perforated cappings to the cells containing the coffee-colored mass inside. In this condition the cells are crowded with innumerable spores, and the treatment just mentioned would not have the slightest effect upon them. If the colony be weak we destroy the bees, combs, and quilts, and disinfect the hives. We thus destroy the spores, and so remove the source of infection.

Should the colony be strong in bees we make an artificial swarm of them, confine them in an empty hive, and feed on syrup medicated with naphthol beta. We use this drug because it is non-poisonous or corrosive, and has no odor repugnant to the bees, is a powerful antiseptic, and can be used in great dilution, thus rendering it economical. The frames, combs and quilts are then burned, and the hives disinfected by being either steamed or scrubbed with boiling water and soap, and then painted over with a strong carbolic-acid solution. The bees are confined in the empty hive for 48 hours, by which time all the honey they may have taken with them will be consumed, and such of the bees as are diseased will have died off. Those remaining are then put into a clean hive furnisht with full sheets of comb foundation, and are fed with medicated syrup for a few days longer.

With this treatment, when faithfully carried out, we have had considerable and very gratifying success. The whole secret of this success lies in having the drug ever present to act on the micro-organism, and either kill it or prevent its development and growth. I do not see why formalin, if used in the same way, should not be as efficacious.

[Editor Root then follows with this foot-note:—EDITOR.]

I am sure we bee-keepers of the United States are exceedingly obliged to Mr. Cowan for the valuable information he has given us, and for the clear way in which he has discriminated between spores and bacilli.

As I understand him, the purpose of medicating syrup fed to bees is to kill the spores immediately on their entrance to the bacillus form, as well as the bacilli themselves. Drugs can in no sense kill spores; but if the syrup is medicated with the proper antiseptics, when the spores do hatch (if I may adopt an unscientific term) the microscopic life is killed at once.

This naphthol beta is something that I believe American bee-keepers can use with profit, especially those who have had foul brood in their vicinity, or at least who have had it in years gone by, and are troubled with its reappearance occasionally. If every year all the syrup fed to the bees in such apiaries is medicated with naphthol beta, the time will come when the last traces of the disease, even in spore form, will be wiped out.—Gleanings in Bee-Culture.

The Need of Taking Bee-Papers—An Apiarian Sermon.

BY REV. L. J. TEMPLIN.

WE are living in an age and a country of intense physical and mental activity. Discoveries and inventions crowd on each other with a rapidity that is bewildering. A few centuries ago a man might possess all kinds of knowledge, but to-day to be fairly informed in one or two branches is about as much as a man can successfully aspire to, and to be an expert in any one field of knowledge will tax any man's faculties and energies to their utmost. The discoveries and advances made in any one branch of human knowledge follow each other with such rapidity, the old giving way to the new at such frequent intervals, that even the expert has to hustle to keep up with the advancement of his own specialty. The need of fresh information along all the different lines of knowledge and activity has led to the publication of journals devoted to each of those fields of activity. The man who fails to take and read one or more of these publications devoted to his branch of business, will soon find himself like a chunk of driftwood lodged on the bank of the stream after the flood has gone by.

While this is true of all branches of knowledge and industry, it is eminently so of bee-keeping. Scientific bee-culture is less than 50 years old, and it would be sheer egotism for us to claim that we have attained to anywhere near perfection in the pursuit. We do well to revere the memories and honor the names of Langstroth, Quinby, Grimm, and other fathers in bee-keeping; and we will profit by a thoro study of their excellent works on the subject; but we do not want to sit down on their graves and dream that all has been accomplisht that is attainable. For in that case the world will soon move on and leave us behind; for as Galileo declared, after recanting his teachings in regard to the motion of the earth around the sun, as he rose from his knees before the dignitaries of the church he remarkt in their hearing: "It does move, tho." And so the man who sits down and waits will find, Bro. Jasper to the contrary notwithstanding. Such a man has made a mistake; he ought to have been born two or three centuries earlier.

By the way, what an age and a country we are living in. Standing on the verge of the closing century, and looking backwards across the years we see, with the exception of the one all important event in human history, the incarnation of the Son of God for the redemption of men, the most important of all the sixty centuries covered by human history. A list of the mechanical inventions and the discoveries in science that have been made during the present century would more than fill a full number of the American Bee Journal. Going back to near the beginning of the century we find in 1807 Robert Fulton launching his first steamboat on the Hudson River. This drove the many boats propelled by oars to the shore to rot.

Next came the railroad, superseding the freight-wagon and the prairie-schooner wherever it went. Then came the telegraph annihilating time and distance; and now the telephone threatens to annihilate the telegraph. Near the middle of the century the steamship put in an appearance in spite of the assertions of scientific men that it could not succeed. These great floating palaces, which are almost like floating cities, have replaced the old sailing-vessels, reducing the time of passage from several months to less than a week. A very learned man in England wrote a very learned pamphlet to prove that in the very nature of the case it was impossible for a steamship to cross the Atlantic Ocean. The first copy of that pamphlet that was ever brought to America was brought over in a steamship.

The old wooden war-vessels have given place to the great steel-built and steel-armored war-ships with guns that will hurl shot and shell a dozen miles, and with such accuracy that a ball can be planted inside of a square yard at the distance of two or three miles. In small arms the repeating rifle and the Maxim rapid-fire guns have displaced the old smooth-bore and muzzle-loading arms of past years.

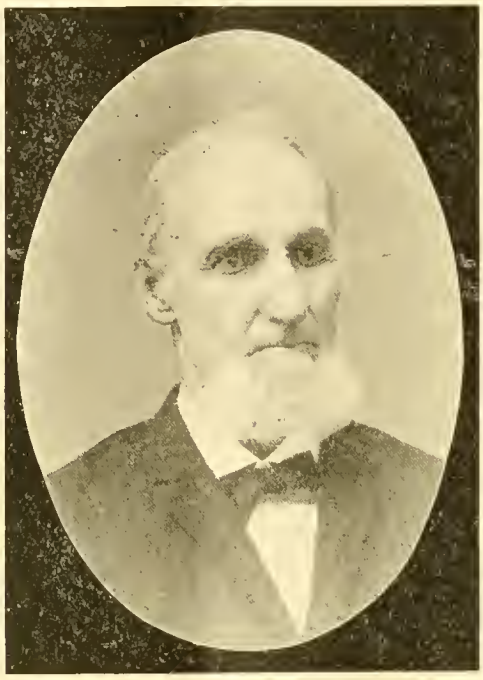
The mowing and reaping machines have superseded the old sickle, cradle and scythe. The separator has done away with threshing with the flail, and the tramping of horse and oxen. The sewing-machine, with its tick, tick, tick, has rendered obsolete the "Stitch, stitch, stitch, band and gusset and seam," of Hood's needle-woman. The old hand printing-press, workt with so much back-breaking energy, has given away to the great Hoe power press that will print and fold thousands of the great daily sheets in an hour, to be scattered over all the country, like leaves of the forest, carrying more light and knowledge, more slander and degradation, than any other agency ever employed by the race.

The electric light has caused the candle, the kerosene lamp, and even the gas jet, to largely pale into dimness; and as a motive force electricity threatens the dominion of steam itself. Sir William Thompson, probably the highest authority in the world, recently said: "The steam-engine is passing away." And in liquified air may be concealed latent forces that will render even gunpowder and electricity back numbers.

All these, and a thousand other wonders, have been achieved within the life-term of people yet living. The writer, tho a good many years short of three score and ten,

has seen three dozen men in a field at the same time wielding the old sickle or reap-hook, keeping step and moving together with the precision of well-drilled soldiers. He has seen grain thresht with a flail and winnowed with a sheet. He remembers when the women cookt by the fire-place in pots and kettles, and when the cook-stove was introduced amidst the usual opposition to new things. The spinning-jenny and power-loom have turned the hand-loom into stovewood, and relegated the old spinning-wheel to the garret, whence it is brought on "state occasions," as relics of a bygone age. The writer has seen hundrds of pounds of wool and flax spun and woven, in his own home, on these now superseded implements.

No man can say what the future has in store for us, and no wise man will venture to predict that anything that anybody wants done will not be done. It is a grand time to live, with the bright past and brilliant future. I cannot understand how anybody can sit down on an old bee-hive and sulk or think of discouragement. The supply of earnest, energetic, courageous people, is far below the demand. Especially to the young, the times appeal for pure, healthy bodies, thoroly cultivated minds, and large, sympathetic hearts, to grapple with the great problems of life, and lift



L. J. Templin.

till they see stars, and even far beyond them, to aid in elevating the race to a higher plane of life.

To succeed in the bee-business, or any other for that matter, one must be alive. And life means more than mere existence. Nothing has a more real existence than a granite boulder, and yet we never think of it as possessing life. Life means correspondence with one's environment. This correspondence is not duration, but knowledge. The nature of this life depends upon the character of the environment with which one corresponds. If the environment is limited the life is limited; if it is temporary the life is temporary, and if the environment is eternal the life is eternal. "This is life eternal to know Thee, the true God, and Jesus Christ whom Thou hast sent." Knowledge is life. This correspondence with, or knowledge of, God constitutes eternal life. It includes the idea of unending existence, but means much more thán this. This life begins here, and now, whenever a soul comes into this sympathetic correspondence with the eternal environment, and is extended into a future state of existence. Death has no more power to begin or end this life than a light frost has to begin or end the life of a pine tree.

So the life of the bee-business consists in a knowledge of the bee-hive with all its appurtenances, that will stimulate the individual to put forth his or her best efforts to produce the best possible results. As one cannot understand about eternal life without studying His Word, neither can a bee-keeper keep up with the constant advance in knowledge and methods of his business without studying what has been done and written, and what is now being done and written by the masters in the business. In order to do this he must not only read the standard books on the subject, but he must take and read one or more of the excellent publications now furnisht so cheaply. The man who thinks he does not need these helps will soon find himself trotting along behind the band-wagon, when the main procession has moved on out of sight. The world has no use for an old fogy. Society has enough inertia of its own, without hitching on a lot of dead men, or those who ought to be dead, to clog the wheels of progress.

It seems a part of human nature for men to become conservative as they grow old. Standing with their faces to the past, as the young do with theirs to the future, they gradually fall out of sympathy with the present. We sometimes hear them lamenting for the good old times. Take away from them all the inventions and discoveries, all the blessings and good influences that have come to the world in the last 50 years, and a few weeks' experience would satisfy them with "the good old times." I have often thought what an excellent scheme it is, that when a man loses interest in the world and its advancement; when he becomes fossilized, and a shell forms on him that will no longer expand in sympathy with a moving world, that death comes along and quietly lays him in the grave where he will no longer be disturbed by the changes and innovations of a younger generation.

Did it ever occur to you what a condition the world would be in if the generations that have lived and died in the past were living, with all their prejudices, fogyism and narrowness? What a time we would have in making any advance or improvement along any lines of human interest. Propose any improvement or change, and you would be met with the response: "Why, that is not the way we did two thousand years ago." Another would be ready to declare that five thousand years ago such a thing was never thought of. Would we not have a fearful task in heaving the world up such a hill as that? Why, it is bad enough as it is, when one man in ten thousand does not live to be a hundred years old. No man has a right to stand in the way of the real progress of the world; so if Dr. Miller, or Root, or Doolittle, should become fossilized or ossified in the joints of their minds so they cannot dismount from some hobby that has become crippled or so antiquated that it cannot keep up with the movements of the bee-keeping world, let him retire, and let the boys come forward and run the ranch awhile.

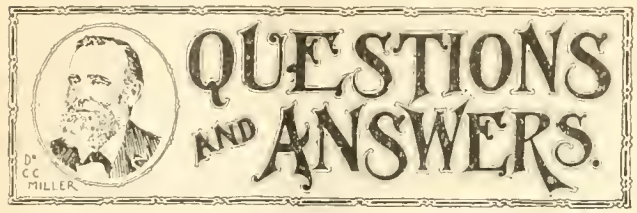
The bee-business is a delightful one—if we can only succeed. But while enjoying the sweets of this life it is well to remember that which is "more precious than gold, yea than much fine gold, sweeter also than honey and the honey-comb."

Well, I could wish that all bee-keepers might live to be a hundred years old (if they would not get fogyish), and then be translated to a happier clime, where the ills of this life are not known. Fremont Co., Colo.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

The Premiums offered on page 474 are well worth working for. Look at them.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Blacks and Italians in the Same Hive.

I Italianized a colony of black bees in October, 1898, and I thought they were all right, but when I examined them the past spring I found about $^2/_3$ of them were pure Italians, and $^1/_3$ pure blacks. There is not a hybrid in the hive. I have been keeping bees for 15 years, and I have never seen anything like it before. VIRGINIA.

ANSWER.—The first cross between blacks and Italians are by no means a uniform lot, but part of them are in appearance Italians and part are black. So what you have observed is the rule and not the exception for the *first* cross. With later crosses the appearance of the workers becomes more uniform, showing one or two bands on each bee.

Transferring Bees from Box-Hives.

How can I transfer bees from box-hives into new frame hives? The combs in the old box-hives seem to be in every shape and form. WISCONSIN.

ANSWER.—How to transfer has been askt for several times in the past few months, and in each case it was replied that the text-book should be consulted, for this department is merely intended to supplement the text-book without going over all the ground contained therein. It may be said, however, that you may do better not to transfer now but to leave the bees where they are till time of fruit-bloom next year. With combs "in every shape and form" in the box-hive, it may not be very satisfactory to try to fasten them in the frames of the new hive. Perhaps the better way will be to leave the bees in the box-hive till they swarm, hive the swarm in the new hive, then 21 days later all the worker-brood will have emerged, and the old hive can be knockt to pieces.

Mating and Laying of Queens—Ants in the Hive.

How long should it be after a queen emerges before she begins laying? Prof. Cook says six or seven days. In my experience it is much longer. On May 5 I had two queens out in a queenless hive, and I put one of them into another hive, also queenless. I lookt several times but it was not till June 16 that I found any brood in either colony, and then only a small portion was sealed.

Again, two queens emerged in two nuclei, one a two-frame observation hive, on June 16, and to-day (July 2) there is no brood nor eggs. On June 30 I saw the queen fly out from the observation hive three times in the course of an hour, twice returning in about 5 minutes, the third time in about 30 minutes, without any sign of having met the drone. On July 1 she again went out three times, remaining out as before: the last time I think she met a drone as the vulva was open, but no appendages were attacht.

Were the above periods longer than usual? If so, what do you suppose was the cause? There were plenty of drones flying; during May and early June the weather was mostly cool and wet. I was much troubled by some very small ants getting into the hives. I got rid of them by putting some poison fly-paper into a small tin box, wetting it with honey, or sugar and water, and covering with fly-wire to keep the bees from getting at it. The ants were soon crowding into it, but the next day there was not one to be seen.

BRITISH COLUMBIA.

ANSWER.—Prof. Cook says in his Manual, "Five or six days after issuing from the cell—Neighbour says the third day—if the day is pleasant the queen goes forth on her 'marriage flight;' otherwise she will improve the first pleasant day thereafter for this purpose." Again he says, "About two days after she is impregnated, the queen, under normal circumstances, commences to lay." That, you see, would make the queen seven or eight days old at time of beginning to lay. But he also says, "If the queen fails to find an admirer the first day, she will go forth again and again till she succeeds. Huber states that after 21 days the case is hopeless." That's as much as to say that she may not be fertilized till nearly three weeks old.

You notice that Prof. Cook says, "under normal circumstances." Queens reared under normal circumstances are in full colonies and the harvest and other circumstances are favorable. The case may be very different if a queen is reared in a nucleus, or if the weather is unfavorable, or if there is a dearth of pasturage. If a queen is reared in a nucleus, even if the cell from which she issued was sealed in a full colony, you will probably find it much oftener that she will begin laying at 12 than at 8 days of age. If her whole larval life was spent in the nucleus, the case is still more unfavorable, and more and more in proportion to the weakness of the nucleus. With bad weather such as you had, you will probably always get about the same results as you had with nuclei. The queen that emerged May 5 and had sealed brood June 16 could not have been more than 34 days old, and she may have been considerably younger. For at first she probably laid very few eggs in a day, and part of the few sealed cells may have been sealed several days. There may have been delay in fertilization, and delay in laying. In the queen hatcht in the observation hive you have a plain case of fertilization after two weeks old, and you need not be surprised if that queen commences laying much later than two days after fertilization.

The ants probably did no harm to the bees, but they are annoying to the bee-keeper, and you took a good way to settle them.

Bees "Wrong End Up" in the Cells—Drone-Laying Queen.

1. I have one colony that is dwindling. They have lots of brood and it looks healthy. I uncapt a lot of brood and about half of it was turned the wrong end up. The larvæ lookt nice and healthy and were alive, but of course they could not gnaw out of their cells. What is the matter, and what shall I do about it?

2. I put hive-bodies full of combs under strong colonies last spring, and the queen went down and laid drone-eggs in worker-cells, filling two to three frames of drone-brood. The workers lengthened the cells and they (the capt cells) look like big warts. Is that regular when you give room below, or is it a freak? WISCONSIN.

ANSWERS.—1. I don't know. It is a very unusual thing to find bees "wrong end up" in the cells, and some have ventured the suggestion that it resulted from weakness. You say the "larva" was wrong end up. If you mean really "larva," it would be an easy thing to be mistaken as to its position, for each end looks like a tail. But if you mean pupa, that is after the form of the head can be plainly seen, then the case is a very unusual one, and I know of no remedy except to give the bees all the chance you can to be strong in numbers, and possibly that may make no difference.

2. The combs being in the under story had nothing to do with the case. It was a case of a drone-laying queen, and you will find that when the queen went up-stairs she did the same work there.

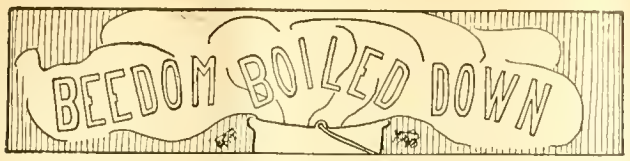
Sand-Vetch—Web Attacht to Bees.

1. Is sand-vetch a honey-plant? My bees work on it all the time.

2. Why do some of the young bees come out with a white web attacht to them so that it is difficult for them to fly? What is the remedy? ALSTAD.

ANSWER.—1. It must be a pretty good honey-plant (I've had no experience with it) or else the bees wouldn't work on it all the time. At least it must be one of the best yielding at the time. For a plant that yields rather poorly will be well visited by the bees when nothing better is to be had, but will be deserted as soon as something better offers.

2. Possibly it is part of the web of the wax-worm. The remedy is to keep strong colonies, and especially Italians. A very weak colony of Italians will keep out the moths.



Bees in the Walls of a House.—A colony of bees were located in the dead-air space between the two walls of a brick house. A. D. Hopps threw in carbolized water all thru the sides by means of a small syringe, and that being more than the bees could stand they came out and were hived.—Gleanings in Bee-Culture.

Duties of Worker-Bees are thus given by A. H. Duff in a Kansas Bulletin: At two or three days old, preparing food and feeding larvæ; at 10 or 12 days old, secreting wax and building comb; at about 20 days old, field-work. The generally accepted age for field-work is 16 days. It would be interesting to know upon what grounds Mr. Duff has departed from the traditions of the fathers.

Controlled Fertilization of Queens.—Dr. Mason gives further publicity in the Bee-Keepers' Review to an item given in Canadian Bee Journal. The Doctor had tried shutting in at 9 a.m. virgin queens and the drones he wanted to meet them, then letting them out when drones had ceast to fly, but both queens and drones were uneasy, fretting and stewing to get out for a flight. Mr. Holmberg has supplied the missing link by putting the nuclei in the cellar where they keep quiet, giving the nuclei a good supply of drones.

Wax-Moths in Strong Colonies.—Dr. Bartrum demurs to the statement of British Bee Journal that there is little fear of wax-moths in strong colonies. Even with the strongest colonies he finds it advisable to squeeze putty "into all the crevices on the top frames of the combs," in order to avoid injury to surplus honey. Possibly the kind of bees has something to do with the case. In England black bees are preferred by many to Italians, and it is well known that blacks—in this country at least—will not protect themselves against moths as will the Italians.

Capacity for Strong Colonies.—A. H. Duff says in the Kansas Bulletin that it would be a fatal mistake to confine a very strong colony to a single story of usual dimensions. A second story should be added, the bees using both stories for brood and honey combined until the beginning of the honey harvest. Then only one of the stories should be left, if comb honey is to be produced, this story being filled with brood. In place of the removed story, two tiers of sections should be given above. If the extractor is to be used, leave both stories, putting the brood below and the honey above.

Separator and Non-Separator Honey.—A picture is given in Gleanings in Bee-Culture of eight sections of extra-fancy honey in bee-way sections. The honey is snow-white and of fine flavor, the only drawback being that some sections are too full and some are lean because separators were used only in every alternate space. Editor Root thinks more money could be obtained for such honey by using the full number of separators. It seems that some make a success of producing section honey with half the usual number of separators, or with none at all, but in some circumstances, perhaps in most circumstances, it is wisdom to use them.

Do Bees Made Queenless Choose Larvæ too Old for Good Queens?—Some time ago Dr. Miller took issue against the somewhat generally accepted theory that bees left to themselves, in their haste to secure a queen as soon as possible, would select by preference larvæ so old that good queens could not be produced from them, maintaining that a queenless colony when left to itself would select the best material it had on hand. Several of the leading writers stood up for the old theory, declaring that actual experiment had shown that when a queen was suddenly removed from a colony a lot of very poor queens was reared. In Gleanings in Bee Culture Dr. Miller says beliefs have been read into his article that he never held. He thinks it the instinct of the bee to rear a number of queens, not all at the same time but somewhat in succession, and after the first few days of queenlessness there being no sufficiently young larvæ present the bees will use those too far advanced, and these will produce poor queens. If all the queen-cells are used the result will be bad. But if the matter is left entirely to the bees to secure from the lot only one queen, the queens first started from the young larvæ will mature before the objectionable ones, and the result will be a good queen. Also if several of the cells are given to a nucleus, the chances are in favor of a good queen. But he counts that the Doolittle plan has the markt advantage that *all* cells may be good.

Prevention of Swarming by Perforated Zinc at Entrance seems to be one of the things at which the novice quite generally grasps with alacrity. As a swarm cannot go off without a queen, it seems the natural thing for the inexperienced to jump at the conclusion that a measure that will prevent the departure of the queen will prevent swarming, without taking into account the fatality that may accompany such a thing. To the inquiry of one more who has conceived the idea of preventing swarming by means of perforated zinc at the entrance, the editor of the British Bee Journal replies with perhaps a shade of impatience (an impatience which is quite justified) that the idea of preventing swarming by such means is absurd. The thing has been tried again and again, and only failures reported. Among other troubles, "excluders have become blockt by drones endeavoring to squeeze thru in the headlong outrush of a swarm, and strong colonies half suffocated thereby in hot weather."

Management for Comb Honey.—H. H. Hyde, having said that as soon as the fast flow has commenced he goes thru, filling the bottom story full of sealed brood as much as possible, placing frames of the youngest brood at the outside of the hives, S. P. Culley heartily endorses the plan, and says: "The principles involved, are briefly, it secures the right conditions to insure prompt starting and vigorous work in the sections, to-wit: (a) it gives a brood-chamber full of brood, not much honey; (b) it obviates the necessity of bees traveling over much honey to reach the super—a thing four out of five colonies do with extreme and expensive reluctance and one or more out of five refuse to do at all; (c) it invites the bees to store honey directly over the brood, which is in harmony with their own idea; (d) placing 'frames of the youngest brood at the outside' of the brood-nest diverts from storing at the sides of the brood to storing above, in the sections."—Progressive Bee-Keeper.

Queen-Excluders Indispensable for Extracting, altho not necessary for comb honey, is the theme of C. A. Hatch in Gleanings in Bee-Culture. He says that without excluders more combs must be used for the same amount of honey, as much of the storage-room is occupied with brood and pollen; labor is saved in the fall, for with the excluder the brood is all where it ought to be; but the strongest point he makes—a point that can hardly be emphasized too strongly—is that without the excluder the queen will occupy extracting-combs, and the food of the larvæ will be thrown out in the honey, to say nothing about the larvæ themselves floating around in it, and the lowering in this way the quality of the honey is a very serious matter. He believes in using plain sheets of perforated zinc. These should not be given when the super is first put on, but after the bees are well started, even if the queen lays in the super. When the excluder is given, put queen and brood below, or at least put only sealed brood above.

Rearing Queens by Unqueening a Colony.—The editor of the Bee-Keepers' Review refers to an article in Gleanings in Bee-Culture in which Dr. Miller admits that when left to their own choice some of the queens will be poor, and holds the Doctor still in error in insisting that the first queens hatcht will be good, and that bees continue to start queen-cells after larvæ are too old. Even if the first queen is best, *sometimes* she goes off with a swarm. Mr. Hutchinson has started as many as a thousand batches of queen-cells, and till he knew better followed the plan of making a colony queenless. Most of the cells were started the first day after the queen's removal—occasionally one the second day. All hatcht on the same day, with an occasional one a day later. That is, the regular cells, but sometimes two or three days after the regular batch was started, what he calls "fool-cells" were started with half-grown worker larvæ, producing worthless queens. So his bees don't do as the Doctor claims—continue starting cells in succession. As Dr. Miller seems to stand alone in his views, one might be excused for asking him why, since he is not a queen-breeder, he should pit his limited observation against that of all those who have reared queens by the thousand.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. JULY 27, 1899. NO. 30

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Cuba as a Honey-Country has been much discust of late. Aaron Snyder has his say in the Bee-Keepers' Review. It is the best honey-country in the world, but after an actual trial he finds so many drawbacks that he does not care for any more of it. Any one thinking of taking his family there should first go himself for six months or a year, and Mr. Snyder says: "It is my opinion that there will not be one man in ten who will not wish, at the end of six months, that he had left *himself* at home."

Shipping Beeswax.—Early this year we had something to say about shipping beeswax in sacks instead of boxes, in order to save freight. It seems that it may not have been good advice, if Mr. G. K. Hubbard is correct in the following, which we received last week:

EDITOR YORK:—I have for some time been wanting to call your attention to an error you made in your paper of Jan. 7, in advising how to ship beeswax; but as the Dadants have given the same advice privately, when to follow it would have certainly resulted in a loss to the shipper, you will see you have good company.

You think it wise to ship from distant points in sacks to save weight. Being saving in the weight of the tare is always advisable, when that is the only point to consider, but in the case of beeswax and many other articles, where the classification list provides for a certain rate if shipt in boxes or barrels, there is also a provision that such articles, if shipt in sacks shall take a rate *50 percent higher*. To illustrate: 176 pounds of beeswax shipt to you from Riverside, Calif., in a 24-pound box or barrel, making 200 pounds gross, would cost, at the present rate of $2.25 per 100 pounds, $4.50. But if the wax was shipt in sacks weighing four pounds, making the shipment 180 pounds gross, the freight charges would amount to $6.07, because when so packt it requires a rate of $3.37½ per 100 pounds.

G. K. HUBBARD.

We must confess that we were not aware that there was any such difference in classification as Mr. Hubbard mentions, and see no good excuse for it. Certainly, beeswax ships just as safely in sacks as in anything else, and just why the railroad companies should make a higher rate when thus shipt, than when in boxes, we cannot understand. Evidently that classification needs revising.

The Philadelphia Convention Program.—Dr. A. B. Mason, Sta. B, Toledo, Ohio, the secretary of the United States Bee-Keepers' Association, has sent us the completed program for the national convention to be held in Philadelphia Sept. 5, 6 and 7, next. A copy of the same follows:

Necessity of Pure Food Legislation from a Bee-Keepers' Point of View—Rev. E. T. Abbott.
Out-Apiaries and their Management for Comb Honey—W. L. Coggshall.
Possibilities and Difficulties of Bee-Keeping in Cuba and Porto Rico, and the Effect of Our New Relations With those Islands on Our Honey Market—Fred L. Craycraft and W. W. Somerford.
Best Method of Comb-Honey Production, with Latest Hive Improvements—F. Danzenbaker.
Possibilities of Bee-Keeping—Address by G. M. Doolittle.
Marketing Honey—Can and Ought We to Control Prices?—P. H. Elwood.
Bee-Keeping and the Source of the Honey Supply in and Around Philadelphia—W. E. Flower.
Foul Brood: Its Detection and Eradication—N. E. France.
Our Pursuit as Viewed by an Amateur—F. Hahman.
Why Bee-Keepers' Exchanges Fail—C. A. Hatch.
Bees or Honey—Which in Spring Management?—R. F. Holtermann.
Bee-Keeping as a Profession—W. Z. Hutchinson.
How to Successfully Conduct a Bee-Keepers' Exchange—J. Webster Johnson.
The Fall Honey Crop of Philadelphia—John L. Kugler.
Organization Among Bee-Keepers: If Desirable, Why, and How Best Accomplisht?—Thomas G. Newman.
Best Method of Extracted Honey Production—Frank Rauchfuss.
Address by A. I. Root.
Fads, Fancies and Follies in the Apicultural World—Hon. Eugene Secor.
The Products of the Bee—Pollen, Propolis and Honey—W. A. Selser.
Food Value of Honey—Its Adulteration and Analysis—Prof. H. W. Wiley.
President's Address—E. Whitcomb.

Secretary Mason announces that since his last notice was publisht about rates, the Western Passenger Association has written that the rates in their association will be one fare for the round trip plus $2.00, added to the rates charged by the other association thru whose territory the person may travel. By enquiring of the local station agent, any one may learn the rate.

For any further information, address Secretary Mason.

Selling Honey in the Home Market.—A very interesting article is one by C. Davenport in the Bee-Keepers' Review. He thinks by once finding customers for 10,000 pounds of honey he could hold the trade right along, but then comes a failure of the crop, and he has not found it to pay to buy from other bee-keepers, and so the trade is lost. He is strong on advertising in the local papers. One year, after the white honey harvest was over, he had 4,000 pounds of mixt amber and dark extracted honey beyond what he needed for his regular customers. Sending the honey to Chicago would net him only 3 cents a pound at wholesale,

and the home market was glutted and prices badly cut. He put an advertisement in his own and near-by towns, saying what the honey was, and that while it lasted he would sell 18 pounds for a dollar. Right below this advertisement was a notice from the leading banking firm of the town, saying $100 reward would be paid if any honey sold by C. Davenport was not the pure article gathered from the flowers. A deposit of $100 in the bank secured this latter notice.

Result: He sold all he had, and some 500 pounds more that he bought. Customers came 20 miles and more, and many sent by friends and neighbors. He made a nice profit over what he would have done by selling at wholesale. He has a class of customers who pay 17 cents apiece for sections which weigh less than a pound, their only concern being to get the best honey direct from the apiary.

Tin Cans vs. Barrels for Honey.—At the risk of being somewhat monotonous on this subject, we wish to refer to an illustration bearing directly upon it, which came under our observation about two weeks ago.

We were called over to see a shipment of honey that was sent in barrels from a Mississippi bee-keeper to one of the Chicago commission men. There were two large barrels holding 600 pounds each, or about 1,200 pounds of honey when they were started from the Mississippi railroad station, but when they arrived here there was only 250 pounds of honey left in them. The barrels lookt good and strong, and had no evidence of leakage at the bung-holes, but one end of each barrel had the appearance of having leakt. We think the barrels were shipt standing on end.

It was certainly a big loss of honey, and we couldn't help thinking that had the shipper used cans there would have been no trouble. At least not all of the 20 cans that would have been needed to hold the honey would have leakt.

We are still in favor of cans, and we believe the Mississippi bee-keeeper will be like-minded hereafter. But it is a rather costly experience for him.

The Market Price of Honey.—Mr. H. S. Jones is a bee-keeper of some 50 colonies in this (Cook) county. Naturally, of course, he is somewhat interested in the price of honey. The following, dated July 19, relates a little of his recent personal experience, and also contains a few suggestions to honey-producers:

FRIEND YORK:—Last week I called upon a certain commission man on South Water street, Chicago. Having made myself known, we started in on the honey-business. My first question was, "How much honey have you on hand"?

ANS.—"Just those few cases of buckwheat; no new honey in yet."

QUES.—"What will be the price of comb honey this season"?

ANS.—"I could sell some first-class honey for 13 cents per pound."

QUES.—"That seems to be a low price for first-class goods."

ANS.—"We expect a big crop this season, and the price will be lower."

QUES.—"Do you know that several bee-keepers have lost all, or nearly all, their bees"?

ANS.—"Oh, yes; but there are plenty left to gather the crop."

This same party wanted me to send him some fine comb honey at once, for the small sum of 13 cents a pound, with a low market. It seems to me there is something wrong, somewhere. Mind you, the market is perfectly dry—no honey in to offer to buyers, still the price is away down for first-class goods! It is quite different with fruit. The first strawberries in the market go away up, and come down to a price where every one can buy. Where is the difference?

Can any one inform me where this commission man got his price of 13 cents? Who gave it to him? Or did he just set that price to suit himself? I cannot understand why, here in a city like Chicago, the price of comb honey should be at such a low figure; and unless the bee-keepers keep up with the sugar trust, etc., they will have to give their honey away and a silver spoon to eat it with. Come, come, bee-keepers; to the front, and make a firm stand for your rights. Everything is advancing in price—why not our sweets, which we work hard for?

Is there not *one* amongst us who would dare get up and start a honey exchange, whereby all bee-keepers could become stockholders, and share in the profits of what the commission men get? The florists have their exchanges, the fruit-growers have theirs. It pays them first-class. The orange-growers have their exchanges, where the fruit is sorted, repackt and sold. They are scattered all over the country, so that no one point becomes overstockt, and is also never out of stock. The prices are governed by the quality of the fruit.

That is what the bee-keepers want. Let *them* set the price on their goods, as any other producers do, giving each grade a fair, living profit. Until we have something of this sort the prices will be low, and lower still. We must get up and establish the price of honey, and not leave it to one man to say what the price of honey shall be.

Come to the front, one and all, and see what can be done before it is too late. H. S. JONES.

There is no doubt about there being a good deal of truth in what Mr. Jones says, and it seems to us that the United States Bee-Keepers' Association could organize a department to inaugurate a plan whereby at least the honey of its own members could be handled more satisfactorily to them than has been the rule heretofore. It would be necessary to have a manager, in some large city (perhaps Chicago), to whom would be shipt the honey, or at least some of it that might need grading and repacking. Doubtless much of it could be graded properly before shipping, and then have it go direct to other cities where needed.

Surely, there are brains and business capacity enough in the present management of the Association to start a plan that would develop into what the honey-producers ought to have in order to dispose of their crops to the best advantage.

Planting Basswood (Linden) for Honey.—Editor Hutchinson grows poetic in an apostrophe to "Lovely Linden," and then takes the poetry all out of it by discouraging the idea of planting a linden orchard with a view to profit. He gives a report from A. I. Root, perhaps the only man who ever put as many as 4,000 lindens in one plantation. The trees were planted in the spring of 1873, one rod apart, and the ground cultivated for two years, and no other crops have occupied the ground since the trees were planted. The apiary among the lindens has given much more honey than the home-apiary two miles away, but only a small part of the trees has done much blooming. This is perhaps because the land is low and wet, besides being poor. E. R. Root adds that one great fault was that sprouts were allowed to grow around the bottom of the tree.

Mr. Hutchinson thinks the only feasible plan is to own the land upon which the lindens grow, otherwise the woodman's ax is pretty sure to ruin the bee-keeper's pasturage.

Uses for Beeswax.—In the Northwestern Agriculturist we find the following recipes which employ beeswax as an ingredient:

GRAFTING-WAX.—To make grafting-wax, melt four pounds rosin, and when hot add one pound each of beeswax and beef tallow. When all is melted, pour into cold water and work the same as you would taffy.

COMMON SEALING-WAX.—Common sealing-wax may be made by slowly melting four pounds of rosin with one pound each of best gum shellac and beeswax. Cool in thin sheets which can be easily broken.

DRUGGIST'S SEALING-WAX.—A good quality of druggist's sealing-wax is made by melting one and a quarter pounds of rosin and adding one ounce each of beef tallow, lard and beeswax. When all is melted stir in one ounce of American vermilion. For use, melt a piece of this wax and dip the corkt bottles into it.

Your Help Wanted to Increase

The List of Subscribers to the Old American Bee Journal?

We really believe that if **ALL** the present readers of the American Bee Journal were so inclined, they could help to double its regular list of subscribers before Sept. 1, 1899—or during the next 5 or 6 weeks. We do not find any fault with what our subscribers have done in the past toward increasing the list of Bee Journal readers—for they have done nobly—but why couldn't the doubling of the list be accomplisht within the next month? We surely think it could be done, and in order that it may be easier for those who help in it, we will make a **SPECIAL NEW SUBSCRIPTION OFFER,** and also pay all who will aid in securing new subscribers. Here is the offer:

Six Months for 40 Cents to a New Subscriber....

Yes, we will send the American Bee Journal **EVERY WEEK** from July 1, 1899, to Jan. 1, 1900—26 numbers for only 40 cents, to a **NEW** subscriber. In addition to this we will send to the present regular subscribers, for the work of getting new 6-months' readers, their choice of the premiums mentioned below, but no premium will also be given to any new subscriber on these offers, under any circumstance:

For Sending 1 New 40-cent Subscriber
——Your choice of one of the following list:

Wood Binder for a year's Bee Journals.
Poultry for Market.
Our Poultry Doctor.
Capons and Caponizing.
10 copies York's Honey Almanac.

For Sending 2 New 40-cent Subscribers
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Dr. Howard on Foul Brood.
Monette Queen-Clipping Device.
Bienen-Kultur (German) by T. G. Newman.
Dr. Tinker's Bee-Keeping for Profit.
Pierce's Winter Problem in Bee-Keeping.
Bees and Honey (160 pages, paper) by Newman.
20 copies York's Honey Almanac.

For Sending 3 New 40-cent Subscribers
——Your choice of one of the following list:

Bees and Honey (160 pages, cloth) by Newman.
Bee-Keeping for Beginners, by Dr. J. P. H. Brown.
Bienenzucht und Honiggewinnung (German) by J. F. Eggers.
Advanced Bee-Culture, by W. Z. Hutchinson.
30 copies York's Honey Almanac.

For Sending 5 New 40-cent Subscribers
——Doolittle's Scientific Queen-Rearing.

For Sending 6 New 40-cent Subscribers
——Prof. Cook's Bee-Keeper's Guide.

NOW FOR A GRAND PUSH FOR NEW SUBSCRIBERS!

It seems to us that with the above low rate to new subscribers, and also the premiums offered, we should get such a landslide of new subscriptions as will make us sweat to care for them during the next few weeks without any help from the hot weather. **WE** are ready now to enter the new names and mail the premiums. Are **YOU** ready to go out and get them, and then send them in?

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Any one sending us **TWO NEW SUBSCRIBERS** to the Bee Journal for one year (with $2.00) will receive, as a premium, by mail promptly, a **Warranted Golden Italian Queen-Bee,** valued at 75 cents; or, send us **ONE** new subscriber for a year, and 30 cents more ($1.30 in all), and the queen will be mailed to you.

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Root's Column

GLEANINGS AT REDUCED RATES....

We do not need to tell you about our journal, for it will speak for itself; but as an extra inducement we make the following low offers:

Offer No. A.

For 25 cents we will send GLEANINGS IN BEE-CULTURE from the time your subscription is received until January, 1900. If you send in your order promptly you will get 6 months for only 25 cents.

Offer No. B.

For $1.00 we will send an untested Italian Queen worth 75 cts. and GLEANINGS IN BEE-CULTURE one year.

Offer No. C.

For $1.00 we will send GLEANINGS IN BEE-CULTURE the rest of this year and all of next year, that is, from the time your subscription is received until January, 1901. The sooner you take advantage of this offer, the more numbers you will receive.

Offer No. D.

For 50 cents we will send GLEANINGS IN BEE-CULTURE 6 months beginning July 1 and Vol. I of Gleanings. This is for the year 1873. There are many interesting things. There are 12 articles on "Starting an Apiary," and while some of these may not be practical now, there is much valuable information and it gives a good idea of bee-keeping at that time. Our supply is limited and of course we cannot continue this offer long.

Old as well as new subscribers may take advantage of these offers, but all arrearages on back subscriptions must first be paid at $1.00 per year.

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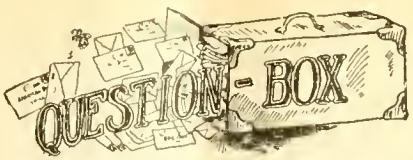

In the multitude of counsellors there is safety.—Prov. 11-14.

Judging the Condition of a Colony by External Symptoms.

Query 98.—Can you by external symptoms determine the condition of a colony without removing any of the combs?—ILLINOIS.

Dr. C. C. Miller—No.

Mrs. L. Harrison—Yes.

J. A. Green—Very often.

J. M. Hambaugh—Not always.

Rev. M. Mahin—Sometimes, yes.

J. A. Stone—Yes, to a great extent.

Chas. Dadant & Son—No, not always.

G. M. Doolittle—Generally, yes. Minutely, no.

C. Davenport—Sometimes to some extent.

O. O. Popplefon—Some of the conditions, but not all.

E. Whitcomb—In many cases, yes; others, no.

P. H. Elwood—No. Haven't any X-ray apparatus.

D. W. Heise—Some conditions I can, and some I can't.

Eugene Secor—Generally, for most practical purposes.

C. H. Dibbern—Yes, almost to a certainty, every time.

Dr. A. B. Mason—Can determine some conditions, but not all.

A. F. Brown—Generally, yes, tho there are exceptions to all rules.

R. C. Aikin—In a general way I can, but outside diagnosis doesn't answer all purposes.

Dr. J. P. H. Brown—In a general way you can; but to get positive knowledge you must go *inside* of the hive.

E. France—No. But can tell a weak colony from a strong one, and give a pretty good guess as to other conditions.

Emerson T. Abbott—Experience will enable one to form a pretty correct idea, but I cannot explain on paper how it is done.

Prof. A. J. Cook—In some measure, but not accurately. You can measure its strength and give a good guess at the cause, if weak.

W. G. Larrabee—I can almost always tell by looking at the top of the frames without removing any, but not by looking at the outside of the hive.

J. E. Pond—I cannot, any more than I can tell what one had for dinner by counting his vest buttons. I can only determine conditions by examination.

Mrs. A. J. Barber—Not invariably. I can give a good guess; but sometimes there are conditions that one cannot determine except by a close examination.

S. T. Pettit—If they are short of stores I can determine that by lifting the rear end of the hive. If they are weak or queenless I can give a pretty good guess by outside symptoms.

G. W. Demaree—Well, I can tell almost at a glance if there are good reasons from external appearances for practical investigation of the internal condition of the colony. Any time excepting in the swarming season I can tell from external appearances when a colony is queenless.

E. S. Lovesy—Yes, in going around among the bee-keepers I can generally tell the condition of their bees before opening the hives, but there is not room in the "Question-Box" for explanations. But

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

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Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Italian Queens

Reared from the best 3-band honey-gatherers by Doolittle's method. Prices—45 cents each; ½ dozen, $2.50; one dozen, $4.50. SAFE ARRIVAL.

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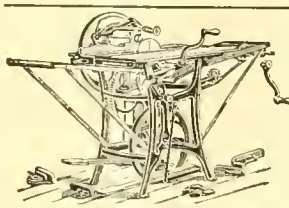

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GUS DITTMER, Augusta, Wis.

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300 Selected Golden Italian Queens

large and yellow all over, warranted purely mated, reared by Doolittle's method. Queens by return mail, safe delivery and satisfaction guaranteed; have 11 years' experience. Price of Queens, 75 cents each; 6 for $4.00; or $7.00 per dozen. Order quick, as above queens are young and will soon be taken. Read testimonials:

ROMEO, Mich., July 10, 1899.
MR. QUIRIN—Dear Sir:—The queens you sent me have turned out the yellowest bees in my apiary, are gentle to handle, are large and well markt. C. C. CHAMBERLAIN.

BLOCKLY, Iowa, July 5, 1899.
MR. QUIRIN—Dear Sir:—The queens I got of you last year are giving good satisfaction, better than some untested queens I paid $1.00 for, to breeders who sell for no less at any time of year.
Yours truly, EDWIN BEVINS.

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30Atf Money Order Office, BELLEVUE.
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Thin Flat-Bottom Foundation
Has no Fishboue in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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Untested, 50 cents each; Tested, $1.00 each. These Queens are reared in a yard that has no 5-banded queens or drones in it.

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when you see a colony with a large amount of bees rushing in and out of the hive, carrying in honey and pollen, as a rule there is nothing serious the matter with them.

Mrs. J. M. Null—To a certain extent, but examinations are necessary to a thoro knowledge as to conditions, as stores, queenlessness, and preparation for swarming. Where movable bottom-boards are used this can be done by raising the hive and looking from the bottom upward.

Adrian Getaz—Yes, I can usually. That is, near enough to decide if there is something wrong or not, and what it is. But it takes close observation and daily visits, as the conclusion is reacht more by the change of the conditions from one day to another, than by the actual appearance of the colony at a given time.

R. L. Taylor—Yes, to a large extent. Thus it is easy to tell in April when the bees are at work whether a colony is queenless, but I cannot tell when a young queen, in a colony from which a swarm has issued, begins to lay. In April and May I am certain of the condition of 95 percent of the colonies without opening a hive.

GENERAL ITEMS

Bees Wintered Well.

My queens of this season's rearing are inferior. Queens were extra good last season. I wintered in a dugout 51 colonies without loss—not enough bees on the cellar floor to bother about sweeping up. All queens were alive and healthy in the spring. Mice made nests in the empty supers filled with planer chips, but did not dare enter a hive. Bees were like crickets all winter.

I have taken off some honey from raspberry bloom. White clover is not yielding yet. JOHN ARMSTRONG.
Chippewa Co., Wis., July 5.

Fall Honey Prospects Poor.

The winter of 1898 I lost 50 percent of my bees in the cold spell of February, the balance coming out weak in the spring. April and May were good for the bees to build up in stores; June and July were too dry. The bees have not made a living. The prospect for a fall flow is poor, as we had a freeze June 30, that froze corn and potatoes, and did lots of damage. White clover is scarce, and linden only lasted three days on account of dry weather. I used Mr. Raymond's plan for increase, to perfection.
Success to the American Bee Journal.
Hardin Co., O., July 15 F. MCBRIDE.

Moving Bees a Short Distance.

My bees are doing very well The alfalfa is coming into bloom the second time, and I am in the middle of a 3,000 acre field of it, and the prospect is flattering for a good flow of honey.

I moved my bees this spring about 100 yards, to set them under young cherry trees, and for the benefit of those who may want to do the same, I will tell here how I did it. I just took them up and carried them to their new stands, and the next day they went back in considerable numbers; I let them alone till the afternoon, and then I set three or four hives full of combs on the old stands that I moved from, and the bees gathered on them abundantly, when I carried them and put them into the weakest colonies I had. In that way I made the colonies nearly equal, and instead of moving doing the bees any damage I am certain it was a benefit.

On the second day after moving I let them alone in the forenoon, and after dinner I took two hives full of frames of combs with some honey in them and let all the bees there were hovering around their old

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By the inhalation of Oxygen, the specific cure for all lung troubles. For special information regarding THE OXYGEN TREATMENT,
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We have several 25-pound boxes of VanDeusen Thin Flat-Bottom Comb Foundation for sale at $12.50 per box. This Foundation is preferred by many. We have only a few boxes of it at our Chicago Branch, so an order for same should be sent promptly. Address,

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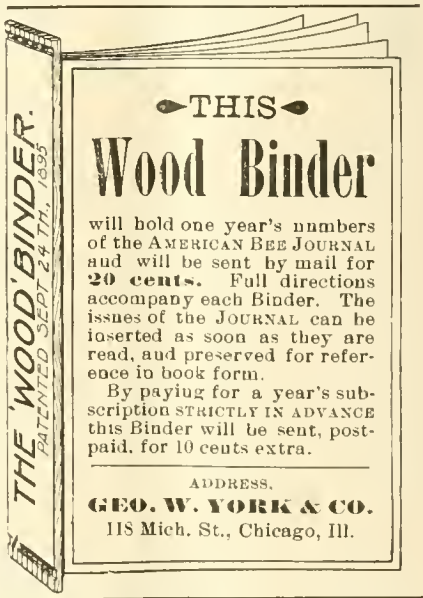
Either 5-banded, Golden or from IMPORTED Italian mothers, 60c each; or 6 for $3.00. A few fine breeders at $1.50 each. Give me a trial and let me surprise you. Satisfaction or no pay. CH. H. THIES, Steeleville, Ill.
26Atf Please mention the American Bee Journal.



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17A17t FREMONT, Newaygo Co., MICH.

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WE DON'T KNOW

how long **Page Fence** will last. J. W. Dewey, Cambridge, Mich., has some 13 years old. Says he thinks it good for 50 years more.

PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

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Bees by the Pound

YOUR OPPORTUNITY!

We have arranged with a large bee-keeper in Cedar County, Iowa, to furnish ONE-FRAME NUCLEUS OF BEES WITH WARRANTED PURE ITALIAN QUEEN and ONE POUND OF PURE ITALIAN BEES—all for only $2.00; or in lots of five at $1.80 each. There are only 75 for sale. Better order quick if you want any. If more of the queens are wanted, these can be had at 75 cents. All queens reared by the Doolittle process.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

camp-ground go into the two hives, and there were enough to make two good colonies. I just left them in the hives, and at dark I carried them over and let them remain in the hive, and in two or three days I gave them queens; now they are filling their supers with honey, and are as good colonies as I have. So, you see, one can move bees and not lose any, but improve them instead.

The bees didn't go back to amount to any thing on the third day, and I had no more trouble with them, but all boxes and pieces of boards, in fact everything, must be cleaned off the old yard, so they will have nothing to cluster on. I moved 37 colonies.

A. J. SNOWDEN.

Buffalo Co., Nebr., July 16.

Honey Crop Light.

The honey crop here is light. When the clover was on it was too cold; and when the linden came it was too late. Thistle so far is yielding but little. S. T. PETTIT.

Ontario, Canada, July 18.

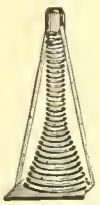
But Little Swarming and Honey.

Bees are working pretty well now. There has been scarcely any swarming in this part of the country this year, and but a light honey-flow the forepart of the season.

Will Co., Ill., July 19. A. B. METTLER.

Double-Wall Hives.

I notice Cogitator says, on page 421, that my double-wall hives are like fencing a pasture with no pasture between. I have tried the other double-wall hives and given them up years ago, for reasons best known to myself. I would not say anything about other people's way of doing things. Then, on the other hand, I do not want other people to do my way. A colony of bees that would not winter thru our winters in my



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NEW LONDON, WIS.,

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They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00;	each, by mail,	$1.50
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Conqueror	3-in. stove.	Doz.	6.50;	" "	1.00
Large	2½-in. stove.	Doz.	5.00;	" "	.90
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—Have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.

January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. **INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.**

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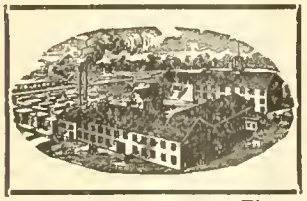

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Illustrated Catalog, 72 pages, Free.

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Address, **E. KRETCHMER, RED OAK, IOWA.**

20A13t Please mention Bee Journal when writing.

Please Mention the Bee Journal when writing Advertisers.

hives would not be worth wintering. At this date, here in Cook County, I have taken off two full supers of fine comb honey from each of several colonies. Who can beat that? H. S. JONES.

Cook Co., Ill., July 19.

An Old Acquaintance.

Bees wintered well here last winter. I lost none from 40 colonies. Our main honey plant is alfalfa, which we have in abundance. The honey-flow is light now, but the outlook is good. The second crop of alfalfa is just beginning to bloom.

I have a long acquaintance with the American Bee Journal, my father, Dr. N. P. Allen, of Kentucky, having taken it for about 30 years. He was at one time President of the North American Bee-Keepers' Association, while Thomas G. Newman was editor of the Bee Journal. Success to you, Friend York. J. C. ALLEN.

Finney Co., Kan., July 13.

Too Much Rain.

I haven't taken a pound of honey yet this year, and prospects for a fall crop are very poor. It rains so much there doesn't seem to be any honey in the flowers.

Sauk Co., Wis., July 19. H. H. PORTER.

Storing No Honey.

Bees in this vicinity are storing no honey at all. We had a good flow of honey-dew in May, and lots of swarms, but it rained nearly every day during the basswood season, and after that the nectar seemed to dry up entirely. The vast areas of black sumac here is not worth a cent. It may be that cotton will help us out. LEE LONG.

Choctaw Nation, Ind. Ter.

Very Light-Colored Bees.

I have just been watching a colony of bees, and saw a large number going out, and of the lightest-colored bees I ever saw. They are many shades whiter than any albinos I ever saw. Just look at them thru a magnifying glass. HENRY ALLEY.

Essex Co., Mass., July 16.

[We received the sample of bees, and they are indeed the lightest colored bees we ever saw. Personally, we prefer the yellow bees for looks.—EDITOR.]

Did Well at Swarming.

My bees have done well at swarming. I had 13 colonies in the spring, lost none in the winter, and now I have 45. Seven were doubled up, and 5 left for the West. There is not much honey. I do not know how to work bees very well, as I am young at bee-keeping tho old in years.

MRS. PETER R. DICKSON.

Winona Co., Minn., July 14.

"Hand-Shaking Contagion."

No, Mr. Cogitator, I shall not attempt to inflict statistics regarding promiscuous hand-shaking, as per your suggestion on page 421. A reasonable amount of it could be easily given, however, but a little reflection as to possibilities will prove sufficient to clinch the note of warning to which you very good-naturedly refer.

It need only be considered how minute a quantity of virus is necessary to inoculate the human system, to find the key for many infections. We may breathe in an infinitesimal amount with the air we inhale, to prove sufficient for the production of most dire diseases. So, a very little exudation from an infected hand coming in contact with some abrasion on a neighbor's fingers is quite sufficient to impart some of the diseases to which the human skin is liable, especially those having affinity for the hands.

Cogitator need not be reminded tha eruptions on the skin are simply manifes

tations of a more or less seriously contaminated blood, making effort to eliminate its impurities upon the surface. This is Nature's attempt at freeing the system of unwelcome substances, whether inherited or acquired. Now, there is no difference how the trouble occurs, whether the poison is attacht to a door-panel or a big brass knob, if it comes in contact with an abraded portion of the body, so that it may be absorbed, contagion is all too likely, but, of course, not so probable as direct contact with the warm, moist, and active skin of the hand.

So clearly is the danger appreciated that now public functionaries, when compelled to recognize the multitudes, sensibly wear a light pair of disinfected gloves during the general hand-shaking performance. The custom especially prevails in European court introductions, and other formal occasions.

As more thoughtful attention is given this subject, our democratic officials will learn to recognize its importance, and gladly imitate its more sensibly aristocratic brethren "over the drink."

There, dear Cogitator, you have impelled me to write nearly a small book in refutation of your doubts, and that, too, of all other questionable mediums for the purpose, in a bee-paper. Now be good.

DR. PEIRO.

Flowers Scarcely Visited by Bees.

I had the first swarm of the season July 11, and took a heap of comfort hiving them, as they clustered low on a grapevine. My joy was of short duration, for they were no sooner in the hive than out they came pellmell, and returned to their old hive.

Our colonies have made a living, and reared large families, and yet spend the larger part of each day clustered in their porticoes. The bloom of white and sweet clover is quite plentiful, and yet a bee is seldom seen visiting them. Did last winter's freezing destroy the sweetness? There was a flow of honey for a day or two, during basswood bloom, tho a portion of it may have been from the buckbush.

Bees have not carried water for a fortnight; during the forepart of the season they could be seen at almost all hours of the day around the hydrant, but not a single bee is to be seen there now.

Vegetation is very rank from frequent showers, and there may yet be a fall flow of nectar. Bee-pasturage yearly grows less, by the drainage of wet lands, and the bees' only resource is the roads and hedges. "What will the harvest be"? will soon be answered. MRS. L. HARRISON.

Peoria, Co., Ill., July 15.

Queens Untested Italian, 50c each; Tested, $1.00 each. Queens large, yellow, and prolific. Address,

E. W. HAAG, Canton, Ohio,
8Atf (Successor to THEODORE BENDER.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

QUEENS! QUEENS! QUEENS!

Untested Italian, 60 cts. each; ½ dozen, $3.00. Satisfaction guaranteed.

LEININGER BROS.
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The Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—

PROF. A. J. COOK.

460 Pages—16th 1899 Edition—18th Thousand—$1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisht to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipt, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

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EXTRACTED HONEY

We are now in shape to **buy** Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank—The Brighton German Bank Co. (both of Cincinnati, O.)

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 19.—A little comb honey is coming and the best white in pound sections brings 13 cents; some of it is not properly sealed and leaks from those few uncapt cells sufficiently to stain the cases and thus detract from its value. Amber grades, 10@11 cents, and dark, 7@8 cents. Extracted, white, 7@7½ cents. Amber, 6@7 cents. Beeswax, 26@27 cents, and sells on arrival. R. A. BURNETT & CO.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & CO.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 5@6c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, July 12.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Only moderate quantities are arriving of either comb or extracted, with no prospect of the market being heavily burdened with offerings any time this season. Business is mostly of a jobbing character, and for such transactions the market is firm at the quotations. Some extracted of superior quality is arriving from Monterey County.

CLEVELAND, July 22.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & CO.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

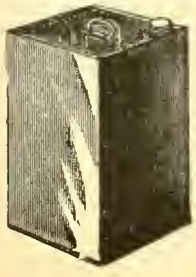
BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.

BATTERSON & CO.

OMAHA, July 18.—Altho first receipts of new crop Southern honey were recorded early in June, there has not been any regularity about them since. A straggling lot of comb turns up now and then, and, when quality is choice to fancy, is eagerly pickt up at 14@15c. A little lot of 1898 crop was received a few days ago and went at 13 cents, quality not above choice. For extracted there is not such an urgent demand, still, 7½@8c would be obtainable in a small way. The heavy buyers will hold back until later in the season, expecting to purchase on about the same basis of values as last year. Early shipments of all the comb that can be gotten out is certainly advisable; there will not be any chance of holding out with present quotations after the first demand is satisfied. PEYCKE BROS.

DETROIT, July 15.—No old honey to quote, and no new offered. Prices are liable to rule higher as crop is short. The abundance of rain will no doubt help the crop of fall honey. Beeswax in good supply at 23@24c. M. H. HUNT & SON.



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I ARISE

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We guarantee satisfaction.
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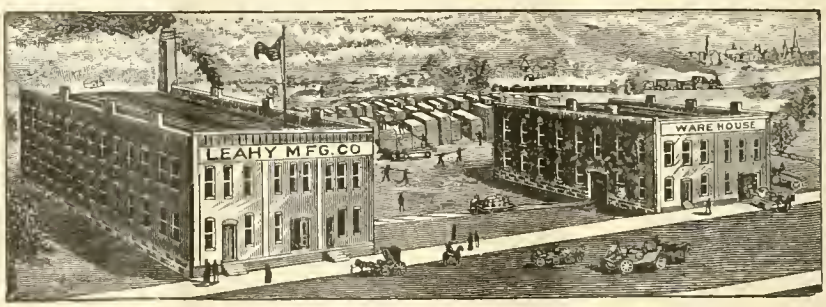

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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., AUGUST 3, 1899. No. 31.

BIOGRAPHICAL.

Mrs. A. J. Barber and Son "Flake."

The principal subject of our sketch this week is perhaps the best known lady bee-keeper in Colorado. She is also a very successful apiarist. It affords us no little pleasure to present Mrs. Barber, and her young son, to our readers. She has this to say in reference to them and their work:

I was born in Oregon, in 1854, and was brought up in California, Utah, Wyoming and Idaho until 14 years of age. Then we went to Kansas. I attended school at St. Mary's Academy, in Leavenworth, for a time, then we settled upon a farm. In 1876 I came to Colorado, and in 1878 we settled here in Montezuma County, which was a new place. At that time there were only five white women here.

In 1882 I was married here to H. M. Barber. In 1890 my husband bought two colonies of Italian bees as an experiment. We didn't expect much of them, as we thought the altitude too great (7,500 feet) for them. We got them in the fall, and it was decided that I should have the care of them. I sent for the "A B C of Bee-Culture," and studied it all winter. In the spring I got another colony, and began.

I had never lookt into a hive before, but soon became so fascinated with the work that I could talk of nothing but bees. In the fall, I had 16 colonies from the three, besides honey for the table. The next year I bought some more, and in the fall I had 67 colonies, in all kinds of hives but good ones. I sold about 1,500 pounds of honey that year, and was fully convinced that I knew all about bees that was worth knowing!

Flake Barber.

About that time one of our neighbors, who had gotten bees from Durango, told me that his bees had died, and he wanted me to put bees in his old hives. I told him to bring his hives, and I filled them for him, and at the same time got 10 of my own colonies infested with foul brood. I treated the bees and saved them, and saved the honey also, to feed the next spring. I boiled that honey and fed it early the next spring, and in June the whole apiary was rotten with foul brood. I treated them, and got them into dovetailed hives. They were so weakened that I doubled them back to 30 colonies. Then I realized that there were many things that I could learn about bee-keeping, and every year since then I am finding out how much I don't know about bees.

We have fair crops, and have never had a failure. We have from 10,000 to 20,000 pounds a year, of comb and extracted honey. We keep from 100 to 175 colonies.

My little boy, who is now not quite 14 years of age, and rather small, for several years has been my helper in the bee-business. For the last four years he has had charge of an apiary every day in the swarming season. We clip all

Mrs. A. J. Barber.

queens, and when I am at work at the home apiary he goes on his wheel to the out-apiary three miles away, and watches for swarms. He catches and returns the queens, and marks the hives so that I can treat them the next day when I visit that apiary. When I visit the out-apiary he works at home. Last summer he had as many as eight swarms some days, and managed them all nicely. He also helps in extracting, by uncapping or turning the extractor, or filling pails. In short, he is serving a regular apprenticeship in bee-keeping, and is busy most of the time. He is a member of the Baptist Church, and an active member of the Baptist Young People's Union.

We do all the work with the bees. There are times

when we call in other members of the family to scrape sections, nail up fixtures, and take the honey to market.

I am still in love with the business, and would heartily recommend it to any woman who is situated so that she can engage in it, provided she has lots of patience, grit and energy.

MRS. A. J. BARBER.

CONTRIBUTED ARTICLES

Extracting and Ripening Uncapt Honey.

BY C. P. DADANT.

I HAVE received the following request for information, which I will answer in the American Bee Journal:

MR. DADANT:—I am seeking information. Will honey extracted before being capt be all right, provided it is put into tanks and ripened? Will this discourage the bees from working and storing?

J. C. T., Miami, Ohio.

We have made extracted honey our specialty in keeping bees for nearly 30 years, or almost since the invention of the honey-extractor; but we have never aimed to extract unripe honey.

Our reason for preferring to produce extracted honey, even tho it is of less ready sale, and of lower price than comb honey, is that we have so many different things to look after—so many irons in the fire—that we find it next to impossible to manage five apiaries with limited help when producing comb honey. The successful managing of a comb-honey apiary requires constant supervision in order to produce honey of the best quality and appearance. Every season the hives must be supplied with a fresh lot of sections, and as fast as these are filled they must be removed and replaced with empty ones, so the combs of sealed honey may not be soiled by propolis and the marks of the passage of the bees—travel-stains, as they are called. Then the product of the apiary must be disposed of during the following winter, for comb honey that has been kept over a year is but a second-grade at best, as there is always more or less leakage and soiling of the sections.

On the other hand, we find that the production of extracted honey lessens the labor. The hives are readily supplied at the opening of the honey season, with the supers and empty combs which have been set aside from the previous crop. One apiary after another may be fitted out in this way with little labor, and one apiarist is sufficient to care for five apiaries, with some time to spare for other work except a few weeks in a very plentiful harvest. If he is accustomed to handling them, and can readily gauge their capacity at sight of the colony, he usually can supply each colony with the amount of surplus-room that it is likely to need for the entire crop, except in extraordinary seasons. And as there is not so much tinkering as with the sections, additional supers, when needed, are soon supplied. When the crop is over, a crew of three to five men takes up the crop in a few days, and the profits are realized without a great expenditure of labor.

Then we find that it is not always advisable to crowd one's honey upon the markets. When we have a large crop many others are successful as well, and prices are low. If we are able to hold our honey we often realize much better prices, for a season of scarcity often follows an abundant harvest. These are the main reasons that have induced us to extract our crops.

We do not wish to be understood as advising others to follow our course, and we believe that each man should act as circumstances direct him; he must be his own judge, and decide on his course accordingly, taking into account his facilities for selling and disposing of his crop, as well as his ability or willingness to put in the labor at taking care of the crop. The average bee-keeper, who has but one apiary, is usually a careful man, neat and precise in his habits. The minutiæ of comb-honey production rather pleases him, he delights in producing fine honey, well sealed, in beautiful white comb, and that is why a great majority of apiarists will always prefer the production of comb honey, even if it was not of more ready sale than the extracted honey.

But I am wandering away from the subject of the enquiry above. My purpose was to show why we have but little experience in extracting unripe honey, since we always make it a rule to leave the honey on the hives till the crop is over, except, as I said before, in extraordinarily wonderful seasons, when it is impossible to furnish the bees enough room in any reasonable amount of supers. But in such extraordinary seasons the honey is usually more easily ripened than in the years of scant crop, especially when the scant crop is caused by a superabundance of moisture.

The late Chas. F. Muth, who so lamentably ended his career a little over a year ago, was a very practical bee-keeper, as well as one of the most extensive, if not the most extensive, honey-dealer in the entire world, and I have often heard him say that he did not care how unripe the honey was, it could be easily ripened by keeping it in a hot place in an open vessel during the hot weather. His method was to use an extractor-can covered only with a light cloth or muslin, kept in an attic until the end of the summer. I will confess that we have never tried this. Mr. Muth had but a few bees, living in the heart of a great city (Cincinnati), and the amount of unripe honey which he harvested could not be much in the way. But if we were to try this method with apiaries numbering 400 to 500 colonies, it would take a very large room and an endless number of large cans. We prefer to let the bees do the work, which we think they can do with much more satisfactory results. The quantity of honey that has to be handled is much less when it is ripe, and the labor much less. The only gain of which we see any possibility in handling unripe honey is the greater ease with which it may be removed, as one does not wait until it is sealed, or till the crop is over, and there is less danger of excitement in the apiary and of robbing during the operations if they are performed while there is still honey to be had. But the latter result may often be attained by beginning the extracting before the entire finish of the crop.

One thing I must emphasize, and that is, that honey does not necessarily need to be sealed to be ripe. A great deal of honey is left unsealed by the bees after the crop, which is as ripe as the sealed honey, and their reason for leaving it in this shape seems to be only because the crop is nearing its end, or is intermittent, and they probably do not see the need of spending time and wax in sealing cells which they think will be emptied of their honey before many weeks.

On the other hand, honey which is sealed by the bees is not always ripe. We have seen many instances of honey fermenting and bursting the caps of the cells, and such honey when found would better be harvested in separate vessels, to be sold separately. We find more unripe honey in our locality from basswood than from any other bloom. For some reason unknown to us we have seen but very little fall honey that was not thoroly ripened within a very few days after the harvesting of it by the bees.

As to the question whether the taking of their honey will discourage the bees, I would say no. The combs are returned to the hive always sticky with honey, and this seems rather to add a new stimulus to their energy. It has always appeared to us that when the honey was extracted during the flow the bees seemed to work with increast energy, so there would be no objection on that score.

Hancock Co., Ill.

Early California Bee-Keeping--Crop of 1899.

BY W. A. PRYAL.

THE early history of bees in this State dates, I might say, from their introduction into San Jose, then, and still, the garden spot of California. Alameda County, which was then a portion of Santa Clara County (San Jose being the county seat), secured colonies of bees from the Garden City, as the fruit-growers in the latter county, even at that time, recognized the importance of bees in an orchard. So, in the latter 50's and early 60's, Alameda, Santa Clara and Sacramento counties were the home for many years of the bee in this State. Of course, it was not long before adjoining counties became stockt with the little workers. Thus, bees were distributed for a distance north and south of about 150 miles. But Sacramento soon became the center of the bee-business. This was owing mainly to the fact that Mr. Harbison lived there, and was engaged in producing honey, making his patent hive, and, I believe, raising nursery-stock.

The forage along the Sacramento River in those days was excellent. Hydraulic or "placer" mining in the hills

and mountains along the tributaries of the Sacramento had not yet sent down "mountains" of debris to fill the grand Sacramento, so that it was continuously overflowing its banks with every heavy rainfall or sudden thaw of snow in the Sierras. I have not seen it so stated, but I think it was the mines that ruined the bee-business along the Sacramento. For years it did not pay to produce honey there. True, there was much honey produced, but it was from weeds that gave the darkest and rankest sort of nectar. It was often unsalable; only bakers could use it. I presume the slickens from the mines was responsible for the growth of these vile weeds. The good forage had been destroyed for the most part.

The bee-keeper was not the only one to suffer from the hydraulic mining industry. Hundreds and hundreds of acres of beautiful orchards along the Sacramento, Feather, American and other streams were ruined by the overflows caused by the washings from the mines. The rivers were filled with earth rock, and other debris, consequently when there was a freshet the water broke over the river banks and carried vast quantities of sand, rocks, dead trees and other debris into the once fruitful orchards. They were ruined, as it was impossible to remove the sand and debris, and nothing would grow in the sand. (Years later this sand underwent decomposition, and is now able to support vegetation.)

Then grain and vegetable fields suffered almost as badly as the orchards; the difference in most cases being that where the farmer lost one crop the horticulturist lost all his crops, or until such time as he got a new orchard into bearing condition. Often, about the time a new orchard was about to yield the owner a return, another flood would again destroy the labor of years. So, in time, the federal government legislated against the running of slickens into the rivers and streams of the State. If the miner wanted to mine with water he must impound the debris. I think this legislation has been in operation over ten years. It has revived the horticultural interests along the streams that were once blighted.

Thus, to a large extent, honey-yielding flowers again sprang up. Then large fields of alfalfa are raised along these streams. I presume many of them are growing on land washt down from the mines, some or all of which contain particles of the finest kind of gold-dust. With gold at its roots the alfalfa along these streams is now giving the bee-keepers golden drops of honey, which in turn bring him golden nuggets.

It was during the past week that I had occasion to learn about the extent to which the business along the Sacramento has been revived. I saw much of the honey piled up in one of the San Francisco commissions. A few days later it was all sold. It lookt very nice. It was alfalfa honey. I am told that while the honey from the San Joaquin valley alfalfa is water-white in color, that of the Sacramento valley is of a very light amber color. I cannot account for this in any other way than that the latter is mixt with some nectar gathered from sources besides alfalfa. The climate of the two valleys is identical, both being very hot in late spring and summer. It is these two valleys that are giving the State its big crop of honey this year. I say "big," for if it were not for these two sources we would have no crop to speak of. The yield in the upper end of the San Joaquin I am told is very good. The alfalfa fields are yielding well. It is destined to be the honey center of California. The yield, I think, this year for the whole State will warrant the bee-keeper getting a good price for his product.

My crop is less than a quarter crop this year. Knowing how to handle honey I managed to get seven cents per pound, less commission. This time last year I was offered three cents for my honey. I would not sell. I told the dealers I would get five before the year was over. In November I sold for 5½ cents. That was something like business. Of course, if I had held on until now I could have obtained a cent and a half more. But I do not believe in holding a product too long. I believe in letting a crop go when you are offered a reasonable price. Give the other fellow a chance to make something. The past spring hay went up to $18 per ton, owing to the dry outlook of the season. I have friends who were offered this price for barns full of hay. They said no; just wait and we will get $30, as it is going to be a dry year. A week later the rains came and hay took a tumble. This season's crop is a good one, new hay already selling for from $8 to $10.

My advice to any one, unless he can afford it is, don't speculate; you may get burned if you do. Leave it to the Leiters and that class. Even they may die poor by speculating too long.

I hear that some commission houses in San Francisco—one in particular—is working hard among the honey-producers of the State to corner all the honey. This latter house is a Jewish concern, and it hopes to make a big thing in honey. While talking with a representative of a certain house, he said that he was afraid bee-keepers would not send on commission; that they might sell if the honey had not been secured already. I intimated that it might be a good thing for his house to get in and do some buying, too, as it has been doing a big honey-business the past two years. The gentleman told me last week that he sold more honey the past two months than he sold previously in all the years he has been in business, and that's over 20 years.

While at this commission house yesterday afternoon I saw a lot of 53 cases of as fine looking water-white comb honey as I ever saw, that was produced in the Sacramento valley, and which was then being carted out of the store to the railroad depot. Just think, it was being shipt to Los Angeles! If that doesn't appear to be "carrying coals to Newcastle" I am sure I do not know what is. Of course, there was a time, I believe, a quarter of a century or so ago, when this part of the State shipt honey to the lower portion thereof, but that was before it was discovered that the lower counties were a vast bee-garden. Of course, it is the drouth down there that has caused honey to flow southward this year. Perhaps next winter the orange-growers in the northern part of the State may be sending their fruit to feed folks of the city of the Angeles. Strange, is it not, that tho a number of the northern counties up along the Sacramento, as well as Sonoma county, send carload after carload of oranges to the Eastern market, we never see any of them in our markets? They come in before the oranges of the southern portion of the State do, consequently they bring a high price, and the growers take advantage of this fact and send them to market where they will get a high price.

I am working on an interesting case that I may send an account of later. It was where a bee-keeper up north always sent five cases of honey to a dealer in San Francisco. It was bought as "tule" honey—a dark honey that is used by the bakers of that city. It was purchast without being sampled, as every dealer knows what the Sacramento and the San Joaquin river "tule" honey is. It was sent around to the party who was to use it, and almost as promptly returned. The "honey" is different from anything I ever saw; it is as dark and thick as New Orleans molasses, and has something of such taste, too. Yet, on careful examination it would pass for a fruit-jelly. I think if it were put in jelly-glasses it would easily sell for such. I am inclined to think the bees that gathered it had access to a field where apricots or prunes were being dried, and just gathered the juice from the fruit. The man whose bees gathered the honey writes the commission house that it was positively extracted from the hives. I am going to write the producer to find all I can about the locality, etc.

The weather is still disagreeable, tho we had a few hot days up to yesterday evening. The indications are that we are going to have early rains, and possibly much of them.

Alameda Co., Calif., July 20.

Making Increase by a Nucleus Method—The Doolittle-Miller Controversy.

BY G. M. DOOLITTLE.

ON page 418 I find an "Open Letter to Doolittle" by Dr. Miller, near the close of which he says he is about to formulate some questions according to the way he understood "Iowa" to mean when he askt those found on page 198, and he will reply to them, sending them and his answers to the editor, asking the editor to send the same questions to me for my reply, so that the readers of the "Old Reliable" can see how we agree. Well, the questions have arrived, and I am going to say just what I think regarding them, even tho I cannot read the same thing out of "Iowa's" statement on page 198 that Dr. Miller does. Here are the questions as the Doctor understands them:

> I intend to increase artificially this year, and for each new colony I intend to start a nucleus by putting in the new hive a frame of brood and eggs and a frame of honey, closing up the two frames at one side of the hive with a division-board, then giving a sufficient number of bees. I intend to get the bees from the colonies with laying queens, shaking the bees from the combs and giving them directly to the nuclei.
>
> 1. How many bees will I have to put into a hive?
> 2. Will a pint do?
> 3. Will these bees rear a queen from the eggs given them?
> 4. Do you think a nucleus formed in this way will be all right?
> 5. Would it be safe from robber-bees? IOWA.

ANSWERS.—1. As it is stated that "Iowa" intends to take the bees which he is to use in forming his nuclei "from the colonies with laying queens, shaking the bees from the combs and giving them directly to said nuclei," I would reply that under such conditions *all* the bees there were in any one colony from which they were taken would *not* be sufficient to form a decent nucleus. If any one has not tried this way of working, it appears very nicely in print, but let it once be tried and it will never appear nice after that, for bees so shaken are the most persistent things in trying to get back to "mamma" of anything I ever had to deal with.

The proposition does not even hint at any precautions being taken to keep those bees in the hive with the comb of brood and honey, and unless such precautions *are* taken, there will not remain bees enough in that hive to make a decent nucleus 24 hours later, no matter if two bushels are put in by the plan proposed, for what cannot get back home again will run out of the hive and scatter over the ground, thru the grass and anywhere but stay with those two combs in that hive. I know what I am talking about, for I have tried it many times, even putting them in just at dark, only to find them scattered all over everything surrounding the hive early the next morning, with scarcely a bee inside on the brood and honey.

These being the true facts in the case, the one word "No" very fully answers questions 2, 3, 4 and 5.

Now I want Dr. Miller to turn to his open letter to me and read the last half of paragraph four over again, then tell us where he got any such an idea from my article on pages 370 and 371, that "Iowa" would "lose a queen by the operation." Did not I distinctly state on page 371, that after the hive having cast a swarm was set on the stand previously occupied by the nucleus that the queen was to be let out of the cage, and "allowed to run in her old home"? And did I not make it equally plain that the queen reared in the nucleus was to be shaken with the bees out in front of her hive so that the queen, the bees from the nucleus, and the swarm, might run into the hive together so that no quarreling would result? Don't throw "hypercritical" back at me Doctor, for if you will take pains to read out, what there is in that plan as I gave it there, you will find one of the great and grand principles which can often be used in practical bee-keeping. It is not always easy to make a *swarm* take another queen besides the one which issues with them, for a swarm having its queen taken from them and a new one supplied before it gets fully settled in its new hive or home, is nearly as persistent in leaving the new hive and going back home as are the bees used to form a nucleus by the way "Iowa" proposed to do it, except the few which are engaged in hugging and persecuting the new queen.

Then I want to say a word or two regarding the first paragraph in your open letter. You say:

> "I trust I shall always have the grace to receive kindly any criticism made upon any writing of mine, so long as the criticism is given in a spirit of kindness."

You and I profess to belong to the Master, and does not the Master enjoin on his followers that they have grace given them from on high to receive kindly any criticism, or anything else, no matter whether given in the spirit of kindness or not, that they may be true representatives of the meek and lowly Jesus, thus honoring our Father which is in Heaven? And if this is enjoined upon us, shall you and I be disobedient children because some one criticises us in unkindness?

Then I wish to say a word or two regarding the questions I askt you on page 306. You evidently seemed to think that I askt them in a captious way, taking the last two sentences in your reply as evidences, together with the little thrust you give the editor in the first sentence. It would seem that you should have known me long enough to know that I do nothing in a captious way, nor to be hypercritical. Perhaps you were a little soured over your controversy with R. L. Taylor, and so are excusable.

What I was after in those questions was to draw you out on some of the fine or nice points with which a queen-breeder has to contend. Those buying queens are not so content with "generalities" as you are, Doctor, and because only generalities are generally given when giving a description of pure [?] Italians, golden Italians, albinos, etc., queen-breeders are often denounced as "frauds, cheats, dead-beats," and everything but honest. To keep my skirts clear of such accusations I keep standing in my circular all the time these words: "I do not claim all the purity of stock that some do, nor lay so much stress on golden bands," and in this way I escape being told that I have misrepresented in the queens I send out. And those questions were put to you in the hope that you would so specify in your answers that some of the pressure of "breeding to a feather" would be taken off queen-breeders who do not keep what I do standing in their circulars.

Of course, I could have told you what I was after, but that would have detracted from your answers, as the readers would have considered that you were doing something to bolster up the queen-breeders in not sending out queens giving bees markt as they were led to think bees should be markt by what they generally read. Were you a queen-breeder, you would realize something of the pressure brought to bear on such breeders by those who are hard to satisfy. Onondaga Co., N. Y.

[The condenst answers which Dr. Miller sent with the questions formulated for Mr. Doolittle, are as follows:—EDITOR.]

DR. MILLER'S ANSWERS TO THE QUESTIONS.

1. A quart of bees might do to start the nucleus.
2. Not so well as a quart, but if the comb is well filled with sealed brood nearly mature, the nucleus might hold its own.
3. Very likely; but I wouldn't give much for such queens.
4. No, it wouldn't be a nucleus that would satisfy me.
5. Not very, if they were troublesome.

C. C. MILLER.

Preparing Extracted Honey for the Market.

(Read by Fred Brown at the California Bee-Keepers' Convention, held in Hanford.)

WE will assume that the bees are gathering honey very fast, as this is the time in which the work is slighted if any, as at such times the honey is often extracted before it is ripe; and that being the case, the honey coming in fast is not allowed to ripen, and when it is put on the market it is not of a good, heavy body, and the flavor is also not the best.

EXTRACTING. The honey should be at least three-quarters sealed, to insure a good state of ripeness, and even then it should not go into the cans without first going thru the tank.

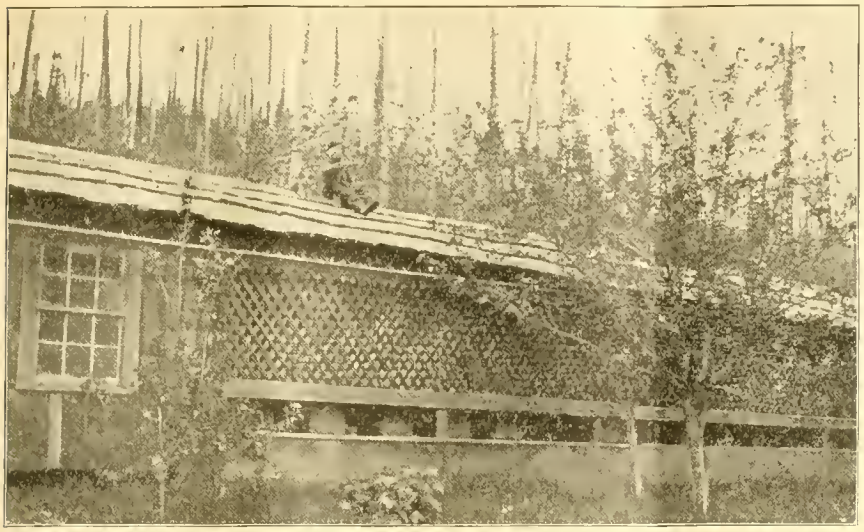
With the honey thus sealed, we will proceed to the apiary, as there is where the preparation for good, marketable honey will begin. We will have a box with a tin bottom, to put the combs in when they are taken from the hive, the tin bottom will prevent there being any drip, which is a waste, that gathers dirt, and will keep your extracting-room in a muss; the appearance will not be tidy, and there is more liable to accumulate filth in the packing of the honey for the market.

After the honey is thus in the house, and is uncapt and extracted by the extractor, it should be run thru a separator. Allow the honey to run thru the tank, or into a tank. And right here I wish to say that you cannot prepare honey properly without a tank.

GOOD, RIPE HONEY.—And further, I wish to say that I hope that the honey-producers of this association will profit by the lesson taught us by the fruit-packers of this community—that it is important to commence right, so there will be no complaint with the honey, as there was with the fruit that has gone into the Eastern market (and by way of digression let me say, there was some very poorly prepared honey that the association placed upon the market last season). Some was very thin, some was very dirty, and was not in a merchantable condition when received by me, and when told to the parties thus offering it, I was met with the answer that if I did not want it there were others in town that would be glad to take it. Such honey, in order to make it marketable, had to be dumpt into a tank and allowed to settle before it was fit to sell at all.

So you will see the necessity of each one that packs honey to have a tank, as poor stuff should not be allowed to compete with good, clean honey. Furthermore, we should have pride enough to want to place only that grade of goods on the market that we know to be absolutely clean, such as would be inviting to a lover of sweets.

HONEY-TANKS.—The best style of a tank, to my notion, is one that is not too deep. The one that I use is 6 feet long by 3 feet wide, and a depth of 30 inches. It will hold about 40 hundredweight, and is not very hard to get the honey into, as it is shallow, and another advantage is that it has a good evaporating surface.



Bee-Shed of Thos. Wickersham, Whatcom Co., Wash.

One should, by all means, have the honey-house so arranged that the honey from the extractor will run directly thru the separator, thence to the tank without any handling whatever, and after a short time the honey can be drawn off, and it will be absolutely clean and marketable.

In my honey-house I keep the tank always full, drawing off about five cans at a time. In this way you always have a good pressure to draw from, and then as the honey evaporates it will settle to the bottom, and the thinnest will be on the top, so you are always drawing off the heavy, thick honey.

HONEY-CANS.—When there is a call for a shipment of honey, cans should be washt clean of all the dust or honey that has been scattered on top of the cans, as often is the case in filling.

In every instance the cases should be new and clean; new looking, so the general appearance will be attractive. Do not use oil-cases, by turning them to hide the marks, as it is not a first-class case, and not a very strong one after being once torn up and reconstructed.

Draw a sample of every grade, and have the cases so markt to correspond with the sample, that there will be no difficulty in locating the different grades, as represented by the sample.

FILLING CANS.—I would recommend that the honey be weighed in the cans, putting in just 60 pounds to the can—120 pounds to the case. If this would work well, which it should, there would be no question about the tare, as it would be checkt up at 120 pounds to the case, and nothing said about the tare. We tried this plan one season, and got some in that way, and if I handle the honey for the association this season I will do all that I can to get the purchasers to accept the honey in this style.

The main point to be careful about is to see that the honey is drawn into the cans from a well-filled tank, and that it is well ripened, and that the proper sample has been taken from each lot. Keep the cans very clean on the outside as well as the inside, and there will be little trouble about unmarketable honey.

As a rule, we in the valley have a good, heavy grade of honey, and with a little care we can build up a good demand for our produce, which will bring a ready market and a good figure.

Bee-Keeping in the State of Washington.

BY THOS. WICKERSHAM.

THINKING that a description of some of our Puget Sound methods of keeping bees might be of interest to some of the many readers of the American Bee Journal, I herewith send a photograph of a bee-shed of my own construction, which has proven very satisfactory.

The shed is 60 feet long and 12 wide, and contains 36 hives. At the left end, where you see the window, I have a room bee-tight for storing honey, supplies, etc.

The lattice-work allows ventilation and light sufficient to make it quite comfortable for handling bees in summer. I have a row of hives on the opposite side of the shed, the same as is shown in the picture. Some seasons I place the hives on the ground in the center of the shed, and pack hay around them for winter; other times I leave them on the summer stands, and have not been able to decide which of the two ways is better. I don't think this is a first-class country for honey in the way of quantity, but I doubt if there is a State in the Union that will excel in quality.

Last season I got 1,800 pounds of fine comb honey from 21 colonies, and increast to 36. The prospects so far this season are very poor, having only two days of sunshine in May and April, and but very little better and still raining in June. It is somewhat discouraging for the manipulation of nectar. However, the bees are in fine shape for work, if "Old Sol" should put in his appearance.

Whatcom Co., Wash., June 2.

[We wish that others would follow Mr. Wickersham's example, and send us photographs of things they have found helpful in their work with the bees. We could hardly agree to use all that might be sent in, but we would try to use as many as we could of the pictures, accompanied by descriptions.—ED.]

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Building Comb from Brood-Frames up thru the Sections.

Why do my bees build up from the frames thru the bottom of the sections? I never had any trouble in that way until last season. I have the "A B C of Bee-Culture," but it doesn't mention a case like it, at least I can't find any.

MINNESOTA.

ANSWER.—The trouble likely occurred because the bees were crowded for room, in which case the evident remedy would be timely increase of surplus-room. Too much space between frames and sections might also be to blame.

Nucleus Balling the Queen.

I have a one-comb observatory hive, and about a month ago I put a frame of brood-comb in it (some of the eggs had just been laid) and about 200 bees; the brood became chilled and died, but the bees remained. Last week I secured a virgin queen from a third swarm and put her into the observatory, together with about 400 of her own bees; all seemed lovely and harmonious for three days; the bees started to clean up the comb and to carry out the dead brood, but on the fourth day, when I examined the hive, I found the bees had the queen "balled," and were trying hard to sting her. I took her out for a few hours, gave her some honey, and let her run back into the hive again, when the bees immediately attackt her as before, running wild after her, and I was forced to remove her for safety. Why should they attack her after so many days, and how can I make them accept her? She is still a virgin. CITY.

ANSWER.—It is hard to give a satisfactory "why" for all the antics of bees with regard to queens. Sometimes

they will ball their own queen after she has been laying a year. In such cases it is perhaps to protect the queen, and it is possible they may have had no evil intent with regard to your queen. When you open a hive and find the bees balling a queen that they have before treated peaceably, the best thing is to close the hive promptly, and generally there will be no more trouble.

Extracting from the Brood-Chamber.

We are having a good flow of alfalfa honey—brood-chambers full and all in the supers. I have taken off some. How would it do to extract from brood-frames about the time the fall flow from heart's-ease begins? The bees averaged 50 pounds last fall of this dark honey. Would you take all the honey out? Will I run any risk of starving the bees? Your kind of splints on foundation for frames are all right. No sagging now. KANSAS.

ANSWER.—Whether the bees would get enough for winter from the fall flow you can only judge by past years. If you extract their white honey from the brood-combs, you must be ready to feed in case they don't get enough from the dark honey.

Glad you like the splints. They certainly work better for me than wires. But I find it doesn't do to give them to weak nuclei, which take time to gnaw out the sticks. With a full flow, in a strong colony, they are built out beautifully.

Colony with Laying Workers.

I had a queen that patcht her eggs and had drone-brood mixt all about with the worker. I pincht her head. Then I gave them a frame with three sealed queen-cells; a week after that I found they had destroyed the cells and were rearing a queen. I cut the cell out. The next day I hived an afterswarm, which I supposed had a virgin queen. All seemed to be lovely for another week, when I found no traces of a queen, laying worker, or anything of the kind. Then I gave them a fine frame of comb with brood and eggs. I then took the measles myself, and left them to their fate for 15 days. Now they have drone-brood stuck all about thru the hive. What was the matter with them? INDIAN TERRITORY.

ANSWER. The queen was lost in some way, most likely on her wedding-trip, and then laying workers set up business. The best way is to break up the colony and give it to others. You can start a new colony more easily than you can get into proper working order a colony in which laying workers have been doing business for some time.

Early Italianizing—Deep Entrances—Preventing the Return of Bees After Moving.

1. In this part of California the bees are all hybrids, and I expect some Italian queens from Eastern breeders this season. Next spring I wish to get as many Italian mated queens into my apiary as possible without too much expense. The climate is very mild here. Can I, early next spring, feed to stimulate these Italian colonies so they will be strong, and part of them have drones before the hybrids have got so far along? Then re-queen the others, and get the queens out and mated before the hybrid drones are out of the comb? They can mate early here, so far as the weather is concerned. It seems to me that if I manage rightly I ought to be able to get as pure Italians as the breeders could produce, without much expense and trouble.

2. I have known it stated that queenless bees will draw out a queen-cell wherever you bruise the comb with a knife-blade under an egg or larvæ. Is this your experience with Italian bees? I will put one cell in each queenless colony.

3. It having been settled by experience during the past year that a deep entrance to a hive overcomes many drawbacks, the next move is to obtain it. I have seen many ways mentioned but I never run across this plan: Take 16-inch shingles and cut them into strips ¾-inch wide and place one or more (butts out) on each side of the entrance, as per the desired depth. The bees then can run up the sides or go the rear end, then climb up. The expense of fixing a hive is scarcely nothing, and not one bee-keeper in a hundred but has shingles lying about the place.

4. When I have occasion to move a colony of bees I have had success in preventing them from returning to the old place, by smoking them quite freely when they are coming out after removing the obstruction. Bees seldom leave their home when anything of this kind is too numerous, and I think in the meantime they discover the change in the location. CALIFORNIA.

ANSWERS.—1. Your plan may not succeed as well as you anticipate, but it will probably do a good deal better than to leave matters entirely to their own course. Draw brood from the hybrid colonies to strengthen the best Italians, then furnish plenty of drone-comb, and with feeding you ought to anticipate considerably the dark drones.

If you want to take the trouble, later on in the season, you might try a plan given in the Canadian Bee Journal. Furnish the nuclei that have your virgin queens with plenty drones of the desired kind. Put the nucleus in the cellar, and after drones in the apiary have ceast to fly, set out the nucleus. If the queen fails to mate, put the nucleus back in the cellar and try it again the next day.

2. I've tried it, but with no great success. Unless you know for sure that the one cell you give is a good one, it is better to allow several and trust to the bees to retain the best. If you give a full colony more than one cell, of course the colony may swarm, but it's better to rear the queens in nuclei.

3. That's an excellent way to enlarge the front entrance and leave the other three sides closed, but I'd rather have all four sides open. The bees don't seem to have any trouble climbing up.

4. I think that's an original plan, and I don't see why it may not be good. A common way is to put a board in front as an obstruction, but a wall of smoke may be a good deal better.

Loose or Tight Bottom-Boards—Wedges in Place of Division-Boards.

1. Ought Langstroth dovetailed hives to be nailed to the bottom-boards or left loose?

2. Can I without hurt to the bees take out the division-boards and substitute wedges to facilitate the removal of the frames which are so tightly stuck together that I have trouble removing them? My frames are the Langstroth-spacing kind. VIRGINIA.

ANSWERS.—1. After trying both ways on a large scale, I wouldn't have mine nailed for a good deal of money. Often it is desirable to have one story above another, and you are blockt from anything of that kind if the bottoms are nailed fast. I don't know that any one nails the bottoms on dovetailed hives. When I want a bottom fast to a hive, as I do in hauling, I fasten it with staples, which can easily be drawn out.

2. If you are in a place where propolis is bad and have self-spacing frames of the Hoffman kind, I'm sorry for you. Putting in wedges in place of dummies would only help temporarily. The bees would lengthen out the cells of the outside frame so there would be no extra room. I have some frames of that kind, and I've taken out the dummy and allowed the frames all to spread a little further apart. But I don't want any more frames of that kind where propolis is plenty.

Number of Extracting-Frames—Putting Supers on Swarms.

1. Do you use as many extracting frames for a super as there are brood-frames below?

2. Will not placing supers from the old hive on the swarm immediately after being hived cause them to neglect drawing out the foundation in the brood-frames? I have two in that condition, and I have taken off some full sections from each. ALABAMA.

ANSWERS.—1. Yes, I've spaced frames the same in the super as in the brood-chamber, when working for extracted honey. I think that is the practice of the majority. Some prefer greater spacing in the super, as with deeper cells the queen is not so likely to lay in the super, but it is probably best in any case to use excluders so the queen can't get up.

2. They may go to work more promptly in the brood-chamber if there is nothing above, but that is not generally considered, for super work is more desired than brood-rearing. But if you want to make sure of the work commencing more promptly below, you can follow the plan of those who do not put on the supers until two or three days after hiving.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

SOMETHING THAT AFFECTS THE HONEY-FLOW.

There is a topic which will bear a great deal more talking about than it has ever received, which is alluded to in Dr. Miller's letter on page 396. About time for us to stop saying so much, it was so cold, or so wet, or such a drouth prevailed, that very little honey came in. Of course, severe cold, or constant rain, or *very* severe and long-continued drouth, arrests the honey-flow; but there is something beyond and different from these which constitutes the main reason. When that mysterious something is right, any one of these three hindrances may hinder greatly, and yet there'll be a fair crop. When that mysterious something is wrong there'll be no flow, tho all three of the regulation scape-goats could be choked to death with old tinware. Let's find out about it. I think the failure of basswood late years is owing to a fungous disease of the blossoms and leaves; but that, too, is an eccentric, and does not touch the main thing. The true solution must be able to account for the sudden commencement of the honey-flow when nothing plainly visible as to weather has changed. "More things in heaven and earth Horatio," etc.

QUEEN-CLIPPERS AND CLIPPING.

Avaunt there, thou queen-clipper, Prof. Cook! Can't you "jist be aisy" without saying that the wisest of insects, the ants, give us a pointer to clip the queen's wing, when they break off the wings of their queens? The wings of queen-ants are apparently articulated on purpose to break off (like the stems of brittle willows, and the bases of leaf petioles), and the wings of bee-queens are not so articulated. Moreover, we have respectable evidence that ant-queens sometimes break their own wings off; and bee-queens are not led to attempt that. Page 386.

BEE-STINGS AND THEIR EFFECT.

Dadant's article on the bee-sting, page 386, is a very interesting one. I doubted the identity of bee-poison with serpent poison, but did not think before of the evidence he gives—stomach revolts violently against bee-poison, but tolerates serpent poison to such an extent that a serpent bite can be suckt with safety. (But *is it* true that a direct dose of apis nauseates the stomach? And isn't it true that a man bitten by a serpent soon vomits violently?)

I see he repeats the same old caution not to rub or pinch the sting out. Very bad advice, it seems to me. Of course, if one could lift off the sting with the point of a knife *without any delay* it would be better; but practically care in extracting the sting means delay, and delay means a full dose of the poison. I would say, get a sting out *instantly*—with thumb or finger nail, if you have a hand at liberty, otherwise rub it out against the most convenient object—and don't rub so gently as to have to rub the second time. My idea is that the holes thru which the poison flows are too small for pressure to send thru very much additional poison, if one is *quick* enough.

RUBBER RINGS DIPT IN HOT BEESWAX.

Mr. Davenport, on page 387, gets a joke off on us, keeps us watching all the way to see the failure he had made, and then tells us that he succeeded. Just dip rubber rings in pretty hot melted beeswax, and honey cannot ooze out under them. It may transpire that this is a very valuable little discovery, and not for honey alone, but for fruit also.

"FOOL NEWSPAPER APICULTURE."

That half-acre of sweet clover under wire netting, to keep the honey unmixt, rather marks the high-water mark of fool newspaper apiculture; but then, yarns of that character don't do us any harm. Page 392.

GLUCOSE—THE GREAT ADULTERANT.

Glucose—editorial on page 393. Ten pounds of liquid lies made for each human being in the nation! We are not *obliged* to drink the liquid pandemonium that another kind of Satan's institutions puts out; but these liquid lies we have to swallow. What are we going to do about it? In some countries the answer to that inquiry would be, "Why, bless your soul and body, we can't even think of doing anything about it. They've got on their side the power, and the wealth, and the officials—and the law, too, all they want of it." It is a proper cause of thanksgiving that in our country, when there are monstrous failures of justice, or great triumphs of wrong, there is not so strong a disposition to say we can't do anything about it. Better the American spirit (even if we have to take Judge Lynch thrown in) than the hopeless, sheeplike spirit which some would commend to us.

MRS. HARRISON'S "DARNED" COMBS.

And so when the worms get in Mrs. Harrison's store of extra combs she just darns 'em—not profanely at all (as to no purpose many a masculine craftfellow has oft done), but with the blessed, old, orthodox darning-needle. Interesting to see that so simple a device, faithfully used every ten days, keeps the combs. Page 413.

MAKING FOUNDATION-MOLDS.

The article of Adrian Getaz, on page 402, is as full of suggestions as an egg is of meat. Portland cement much more substantial than plaster to make foundation molds for home use. The tedium of waiting for the material to set can be borne, seeing you are to get a plate as solid as good stone in the end. His flatwise dipping method seems to be excellent. Rock the dipping plank as you put it in the wax—and whisk it quickly wax side up, when you withdraw it—and finally make the sheet drop off itself by plunging the whole thing in warm water. One advantage of the method is that it is adapted to sheeting *small amounts* of wax.

But perhaps the most valuable thing of all is how to drive nails in little pieces of fragile wood—clamp the pieces in a vise while driving.

"THE NECTAR IN FLOWER-CUPS."

Happy to see Mr. Norton again, on page 403; but I'm pretty sure he's wrong in saying that silica in water is only in suspension. Not even sure that he logically covers all the points to prove that thick and thin nectar do not exist in a flower simultaneously. How does he *know* that two contiguous nectar-glands secrete nectar of exactly the same thinness? What's to hinder a ribbonlike film of nectar in a flower from being half dried down at one end, and nearly in original condition at the other? or yesterday's secretion from being thick, when present thin secretions are just beginning to pour out?

FEEDING IN FAMINE SEASONS.

Queens from eggs taken from the *very best* colonies, and subjects for them to reign over from the laggard colonies, not much good for surplus honey. Worth thinking of—but don't tumble in without thinking. This is anent Dadant's article on page 403. It seems the Dadants, when feeding in famine seasons, have never yet failed to get the honey back, and more, too, before the season was over.

CARE REQUIRED BY SHEEP AND BEES.

Twice a week for a sheep, and not twice a season for the bees—the way the average farmer does. Bees to blame. They could stop this nonsense if they would *always* die off under it, but sometimes they don't. This for the Doolittle article on page 404.

TAR SMELL ON FOUNDATION—ABSCONDING.

I think Dr. Miller is wrong, on page 405, in expecting a swarm not to mind the smell of tar on foundation. The lady says some of the swarms object to running in (just what I should expect), and when they don't want to go in it stands to reason that they may not want to *stay* in. One good and easy way to hold bees which are inclined to abscond is to bury the basket and swarm in a suitable pit until near eventide, and then take them out and hive them. They can't well run away in the night, and by morning they may have decided to stay. If also foul-broody, I'd try keeping them in the pit till they began to tumble down from starvation, and feed them well directly after hiving.

CYCLONE-CELLAR FOR THE BAD BOYS.

And so 8,000 miles from Manila, and less than 2,000 years from the Advent, the first lightning struck from the thunder heads (not dunderheads) of the United States Bee-Keepers' Association. Bully! Now may there be no let-up to the cyclone till the bad boys are all in the cyclone-cellar—substantial and reticulated irons on the cellar windows.

COGITATOR.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Marketing the Honey Crop will soon be a subject in which at least some bee-keepers will be interested. We would be glad to publish the experience of those who have really been successful in the line indicated in the home market. While everybody cannot be expert salesmen, still there are many good plans that no doubt could be used by almost anybody. The question is: How to sell the honey crop to the best advantage in the home market?

Removing Granulated Honey from Combs.—Mr. John Kedrick gives the following method in the Canadian Bee Journal:

First take the cappings, after the honey has been drained out, and put them into a tub of lukewarm water and allow them to remain there for 24 hours or longer, then squeeze the cappings from the liquid. This liquid will be ready for use in the course of six months.

Then uncap the comb and place it in the liquid. Allow it to remain there for 12 or 24 hours, according to the strength of the liquid. Your comb will come out perfectly clean, without being injured. Old comb may be cleaned in the same way.

This liquid for cleaning the comb may be formed in another way, *i. e.*, in a gallon of water put about a pound of honey, and let it stand for some time. The length of time would vary according to the temperature of the place. If kept in a warm place it would be ready for use sooner than if left in a cool place.

After trying about every method, I have proved the above to be a great success.

The Honey Prospects in this (Cook) county have been good for the present season. Last Saturday (July 22) we took a bicycle ride among several of the bee-keepers within a few miles of our home, and found the bees were just rolling in the honey from sweet clover. And there are miles and miles of this wonderful honey-yielder in this county—seas and seas of the fragrant white bloom.

Among the apiaries visited were two of those owned by Mr. L. Kreutzinger, and that of Mr. H. S. Jones. Mr. K. has three bee-yards this season, in which are a total of 200 colonies. Some of the hives had four and five supers on them, many of the supers being ready to empty. He runs his apiaries entirely for comb honey, as does Mr. Jones also.

The four apiaries referred to are all surrounded with a great expanse of sweet clover, and should yield a bountiful harvest.

We believe Mr. Kreutzinger is the largest bee-keeper in this county. We presume he aspires to equal Dr. Miller, both in number of colonies and amount of comb honey produced (when the Doctor has a good crop). But we are inclined to think that Mr. K. did not make expenses during the past two years. But this year may help him out.

An Apiarian Picture Wanted.—The editor of Gleanings in Bee-Culture offers $10 for a satisfactory picture of "a young lady of prepossessing appearance, becomingly drest, holding a swarm of bees on a limb she has just cut from a tree," and stipulates that she must be an unconscious beauty. Rather hard requirements! If she is appropriately drest for bee-work, she will hardly be drest in a very becoming manner, and if she can "have about her an unconscious air of ease and grace" when posing for a $10 picture to be admired by all the readers of "A B C of Bee-Culture"—well, perhaps there are some angels keeping bees.

We notice further that Editor Root says all that will be put below the picture will be, "A Good Catch"—not even the name of the charming young lady. Now, that's real mean! Many a young fellow will wonder why her full name and address is omitted if she is "A Good Catch"—presuming that the "Good Catch" may refer both to the winsome young lady and to the swarm of bees she is holding.

Get and Keep Up-to-Date.—On page 468 of last week's number, Rev. L. J. Templin gave quite a sermon along the line of keeping up with the present progressive times. It will repay a careful reading even if you don't agree with all he says. We need occasionally to have recounted the many onward steps in our advancing civilization, lest we fail to note the rate of speed at which the world about us is moving, and we be left far in the rear.

Right in line with Mr. Templin's suggestions are the following, written by Editor Hutchinson in the July Bee-Keepers' Review, to which we invite attention:

CATCH THE SPIRIT OF THE TIMES.

Perhaps I am a little peculiar. I am quite given to following observation with speculation, theorizing and moralizing—to the drawing of lessons from very small circumstances. If a man comes into this town and starts in some business that is really overdone, and actually proceeds to take business right away from men who have been here for years, I am interested in knowing exactly *how* he did it. I want to get right down to the root and foundation, to discover the *principle* upon which he succeeded. If a man fails in business, especially one who has been apparently successful for many years, I am interested in knowing *why* he failed. In such cases there is almost always something wrong. I do not mean wicked, but not managed as it ought to have been. The causes of failures are numerous, and the one that leads to a particular failure is sometimes the

least suspected by the unfortunate man who is making the mistake. Some merchants have failed from employing cheap, inefficient help, under the mistaken idea that they were practicing economy. Others have greatly assisted their success by an opposite course. Some have failed from a lack of advertising of the right kind. Others have succeeded because of their excellent advertising methods. Others have failed because they did not keep up with the times. Their methods were all right for 30 years ago, but not appropriate for this age of steam and electricity. The time was when a man could sit in his office and wait for business to come to him. That day has past. Now he must go after the business—and hustle, too, while he is about it.

A new merchant comes into a town where the merchants are of the old class; he renovates the store from top to bottom, outside and inside; uses paper and paint and plate glass; makes a handsome display in his windows; changes this display quite often; puts in a telephone: has a nice delivery wagon: uses column after column, perhaps page after page, in the local paper; in short, leaves no stone unturned to boom his business; if his other methods of business are correct, he gets the trade, and men who have been in business for years, but have been in a rut, so to speak, will go down—if anybody goes down.

I was quite interested in the way that Mr. Davenport sold his honey at a good price by advertising it in the local papers. This is an illustration of the advantages that may be gained by catching the spirit of the times. A merchant in a small town would find his dollars well spent if he would make a visit to the stores in some large city—simply that he might catch the spirit of the times. I do not mean that he could profitably put into practice all of the methods that he would see, but what he would see would help him to get out of a rut and into more modern and more profitable ways of doing business.

The *way of doing things* makes such a vast difference in the success or failure of any undertaking. I saw an illustration yesterday right from my office window. A man came along selling strawberries. He sat up straight on his wagon seat and bawled "s-t-r-a-w-berries." I saw *one* woman come out and buy some berries. A short time afterward two women came along selling berries. One woman drove the horse, and the other took a box of berries in her hand and called at the door of each house and *showed her berries*. There was scarcely a house at which she failed to make a sale.

If the manufacturer of some line of apiarian goods, whose goods are of the very best quality, would go at it in the right way, he could have the lead in the trade in that line of goods. The goods would have to be advertised in a telling, striking, unique manner. Some commission man in Chicago might receive the lion's share of the consignments of honey if he would advertise himself and his business in the right way. The same might be said of a commission man in New York, or any city for that matter. The trouble is, that so many of us are inclined to keep along in the same old way, instead of striking out and catching the spirit of the times.

Bee-keepers ought to read all of the journals, visit other bee-keepers, and attend conventions. They, as well as others, need to catch the spirit of the times.

Again the Spelling Reform.—Stenog touches on the Bee-Keepers' Review in the following paragraph, which we take from Gleanings in Bee-Culture for July 1:

Mr. Hutchinson is inclined to adhere in the main to the common spelling. He says: "So long as a system is radically wrong, we gain very little by tinkering with minor results." Further down he says, touching the fashions, "Girls' plaid shirt-waists must be laid aside for stripped ones." "Stripped"—how so, Mr. H.?

Don't you see, Stenog, that if Mr. Hutchinson followed the reformed spelling, such mistakes would be less likely to occur? If *stripped* were printed instead of *striped*, it would be corrected to *stript*, and then the error would come to the surface. Better climb in the band-wagon and come along, Stenog. To be sure, you have a big lot of prejudice, but then you have a bigger lot of hard sense, and it is only a question of time when the sense will overcome the prejudice. And you would be of very much assistance. Better come along *now*.

As to Mr. Hutchinson's argument, if argument it be called—"So long as a system is radically wrong, we gain very little by tinkering with minor results"—there would be a good deal in that if it were generally admitted that the present system of spelling is radically wrong. The trouble is that so many think it radically right. Tinker some of the "minor" defects, and get the public used to it, so that the system will not be considered so sacredly perfect, and then the way will be easier to make radical changes.

Mr. T. F. Bingham, of Clare Co., Mich., the big bee-smoker man, wrote us July 14: "Bees have done fairly, and are still doing a little."

* * * * *

Mr. J. T. Calvert, business manager of the A. I. Root Co., spent Friday, July 21, with us. He was returning from his annual trip among some of the Wisconsin and Michigan bee-supply manufacturers and dealers. Mr. Calvert was looking and feeling fine physically, showing that he hadn't been overworkt in handling the bee-supply business this year.

* * * * *

Mr. E. W. Haag is the successor to Mr. Theodore Bender, of Canton, Ohio, in the latter's queen-business. We had the pleasure of meeting Mr. Haag at the Buffalo convention—in fact, he was one of the six or eight of us that "cotted" one or two nights in the same room. Mr. Bender will still continue to handle bee-supplies as heretofore. Mr. Haag's advertisement will be found in our advertising columns. We wish him every success, as we believe he fully deserves.

* * * * *

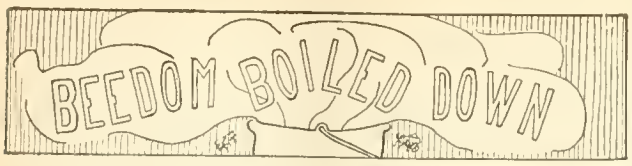
Editor H. E. Hill is in Florida, where he had an apiary three years ago, near the Indian River narrows. He gives a fine view of his apiary. The hives seem right on the brink of a large body of water, on which is a skiff. The picture is a tempting one, and makes one wish to go to Florida. On the St. Lucie River Mr. Hill extracted, barreled, and shipt 3,500 pounds of palmetto honey from 65 colonies in two weeks. When that failed he moved to Miami in the sailboat, and then to Stuart, making a cruise of 300 miles. One morning they were just ready for breakfast when an overhanging limb swept the table bare, throwing the viands to Neptune.—Gleanings in Bee-Culture.

* * * * *

Mr. G. M. Doolittle, in the Progressive Bee-Keeper, speaks thus about writing for the bee-papers:

"As the writers of the past were willing to shed light on our apicultural pathway, we would be ungrateful children indeed were we not willing to hand down that light to others, together with all of the accumulated light that we may have been able to gather as we have journeyed up the mount of apiculture. Oh! how much we owe to those who have preceded us, and yet how often we are selfish enough to hug the whole unto ourselves and keep all we may get and all we may produce within ourselves, claiming that we have a *perfect right* to all we can secure for ourselves. Having received, there is a *debt* hanging on every one thus receiving, to pay that debt with interest, to all who are about us, and in the paying comes far greater happiness than in the receiving. And this is the reason why I write, often when weary and greatly fatigued, when the couch looks far more inviting than the paper and thoughts which I am about to convey, but I thank God that duty calls louder for me to pay my *debts* than does the ease of the couch, especially if my 'scribbling' is of help to any one. Only as all unite in giving their mite to the common good, can apiculture reach the high table-grounds at the top of the perfected summit."

We might add for Mr. Doolittle's encouragement, that the writings of no other of our contributors are more highly valued than are his. So he can rest assured that his work is duly appreciated by many thousands who read the American bee-papers all over this country and others.



Odor and Color Make Bees Sting, says M. H. Mendleson, in Gleanings in Bee-Culture. It is generally believed that certain odors irritate bees, but some dispute that color has any effect. Mr. Mendleson says he buys light, odorless clothes and has no trouble. A gray and a brown horse of his pasture off the grass among the bees, and the brown is often stung at a distance from the hives, while the gray is never stung except when switching the flies.

Does Loss of Sting Cause Death? is a question discust in Gleanings in Bee-Culture, by G. M. Doolittle. Among other things, he says he once mailed a queen on an eight days' journey, putting in with her a worker that had left its sting in his finger, and the customer wrote him that every worker in the cage was alive. Editor Root says that he has several times confined in cages bees deprived of their stings, and they lived two or three weeks, or as long as they would have lived with their stings.

Two Queens in a Hive.—An unusual case was this: June 26 I found in a nucleus a young queen with her wings gnawed entirely away. Directly I found on the same comb a young queen with perfect wings. The two met and had a little conference, but did not seem very hostile. Next day both were present; the 28th I saw the winged one; 29th, the wingless one; July 3, the winged one. So both were there together at least three days, and whether the wingless one is still there I don't know.—Gleanings in Bee-Culture.

Crimson Clover.—J. W. Allison, in the National Stockman, says the chief value of crimson clover is as a soil renovator, for which purpose he considers it superior to any other plant grown. August sowing made a failure, but earlier sowing succeeded. It makes fair hay, but is very hard to cure. It yields 6½ bushels of seed per acre. Sow from July 15 to 20, cover the seed one to three inches—no danger of getting it too deep—then it will make such a good growth by winter that if it does winter-kill you still get big pay for it as a fertilizer.

Shade for Bee-Hives.—Editor Root probably voices the general sentiment in Gleanings in Bee-Culture, when he advocates the shade of trees as the best. He has a decided dislike for grapevines nicely trellist up, because their care is laborious, and because the rapidly growing shoots get in the way of the operator. Near almost every farmhouse stands an orchard, and there, Mr. Root thinks, is the proper place for an apiary. A hive can be so placed under a tree that it is fully shaded during the heat of the day, the sun shining upon it early in the forenoon and late in the afternoon, when the heat is milder.

Izal for Foul Brood.—While drugs for the cure of foul brood are not lookt upon with very great favor in this country, the case seems to be somewhat different across the water. The editor of Bee-Chat, especially, is enthusiastic as to the use of izal. He says:

"It is a fatal error for our scientists to preach the indestructible nature of foul brood spores, in that they readily germinate in the living temperature of the hive, they are easily disposed of in detail, and, therefore, with a little assistance, the strong colony will have no more of them. Only cause the spores to germinate where the said germs find no means of continued propagation and there is an end of them. We have proved conclusively, a strong colony will, under certain conditions, give no resting-place to spores or germs; how much more so with judicious assistance!"

J. O. Beuttler reports in the same journal that by taking the disease in its early stages he is entirely successful with the following mode of treatment:

"If I suspect a hive, I take out the brood-combs, and find in its early stages the disease exhibited here and there in two or three cells by a yellow-looking grub or a dark-sunken-looking covered cell, or even one pierced with small, irregular openings; directly I see this, all such cells, if possible, are cleared out (I use the end of a match) and sealed cells are broken open; when this is done, the bees clear them out, but if not they often leave them sealed up, and give rise to a possible source of infection hereafter. I then see that the napthaline supply in the hive is a liberal one—in fact that the hive on opening it smells of the napthaline. I then feed regularly, and in as great a quantity as they can take down, with syrup medicated either with izal or napthol beta. Directly the bees take this down, there is a noticeable alteration in their behavior, they become more energetic, and a week after the commencement of this treatment, on opening the hive, you will notice the foul-broody cells cleaned out, and healthy brood in its various stages all around the infected area. Again, any more cells which appear infected are opened up and cleaned out, and the feeding, etc., is kept up until the hive has a clean bill of health. If the bees will not take down the medicated food, I force it into the cells with a syringe."

Alsike Clover will yield honey for six weeks, with frequent rains, and a heavy flow for a full month when all conditions are favorable, says F. A. Snell, in Gleanings in Bee-Culture. It may be cut for hay when just nicely in bloom, and thus made to yield honey later. A strong point in favor of Alsike is its hardiness. Mr. Snell has never known it to winter-kill, and it has repeatedly wintered well when red clover has killed out entirely. If not wanted for seed, it is well to sow a little timothy with it, as it stands up better. The length of stalk is usually two to three feet—sometimes on rich land four feet.

Powdered Sugar for Queen-Cage Candy.—"Cogitator" says, in the American Bee Journal, that if powdered sugar is almost always largely cornstarch, it has an important bearing on the provisioning of queens for journey. Worth thinking about. [We have used what is called confectioners' and powdered sugar; but the former contains starch, without a doubt, and it is liable to kill bees and queens in queen-cages provisioned with candy made with it. We have, during the last few years, ordered powdered sugar, and specified that it should contain absolutely no starch. Since we have discovered that confectioners' sugar contains starch, and have used nothing but the powdered sugar without the starch, we have had very much better success in sending queens long distances. With powdered-sugar candy we provision long-distance cages, sending them to Italy, and then have them returned with queens and bees. We have had several shipments by mail, of a dozen each, with scarcely the loss of a queen.—ED.]—Gleanings in Bee-Culture.

A Simple Solar Wax-Extractor, for those who have not more than 20 colonies, is given in the British Bee Journal, by Walter Reid, as follows:

"The first requisite is a wash-hand basin, preferably white, and as round as possible inside—not flat-bottomed. Into this is placed an enamelled colander about six inches in diameter, with a small piece of muslin to cover the holes and strain the melted wax. Upon the basin is placed a sheet of glass, and the extractor is ready for use. For the colander a small pudding-basin may be substituted, with a piece of muslin tied over the top. The pieces of comb are placed on the muslin, and the wax will be found in a cake at the bottom of the basin. In order to secure the highest efficiency, the outer basin may be placed in a box full of dry sawdust, or, better still, cork-dust. Cork-dust prevents the radiation of heat so effectually that at 8 p.m. I have found the wax of the consistency of butter, and could easily remove it with a spoon. Instead of one piece of glass a double thickness may be used, or a piece of old plate-glass. The temperature in this or any other form of solar extractor can be considerably raised by placing a sheet of glass almost vertically upon the glass cover in such a position that the rays of the sun are reflected down into the apparatus. Careful thermometric measurements have shown that the temperature may be augmented more than 50 degrees Fahrenheit by this means.

"Before placing the comb into the extractor it is worth while to cut it up and wash it in cold water. This gets rid of much of the pollen, which otherwise absorbs a considerable proportion of wax. Those who wish to obtain a maximum yield, especially in the case of old combs, should soak the crusht combs for 24 hours in cold water; then boil for a few minutes, and extract the crude cake of wax in the solar extractor."

The Premiums offered on page 474 are well worth working for. Look at them.

Root's Column

GLEANINGS AT REDUCED RATES....

We do not need to tell you about our journal, for it will speak for itself; but as an extra inducement we make the following low offers:

Offer No. A.

For 25 cents we will send GLEANINGS IN BEE-CULTURE from the time your subscription is received until January, 1900. If you send in your order promptly you will get 6 months for only 25 cents.

Offer No. B.

For $1.00 we will send an untested Italian Queen worth 75 cts. and GLEANINGS IN BEE-CULTURE one year.

Offer No. C.

For $1.00 we will send GLEANINGS IN BEE-CULTURE the rest of this year and all of next year, that is, from the time your subscription is received until January, 1901. The sooner you take advantage of this offer, the more numbers you will receive.

Offer No. D.

For 50 cents we will send GLEANINGS IN BEE-CULTURE 6 months beginning July 1 and Vol. I of Gleanings. This is for the year 1873. There are many interesting things. There are 12 articles on "Starting an Apiary," and while some of these may not be practical now, there is much valuable information and it gives a good idea of bee-keeping at that time. Our supply is limited and of course we cannot continue this offer long.

Old as well as new subscribers may take advantage of these offers, but all arrearages on back subscriptions must first be paid at $1.00 per year.

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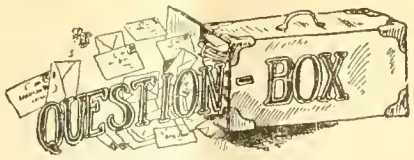

In the multitude of counsellors there is safety.—Prov. 11-14.

Water in the Apiary—How to Supply.

Query 99. Is water in the apiary for the use of the bees a necessary factor? If so, please give one or more methods for supplying it.—UTAH.

G. M. Doolittle—Yes. Small streams and ponds near by give me all the bees require.

J. M. Hambaugh—Yes, or thereabouts. A long narrow box with a float to prevent drowning.

R. C. Aikin—I think not, but I frequently give water. I have a big galvanized pan with stones in it.

Dr. C. C. Miller—It's a good thing. A six gallon crock with sticks of firewood and filled up with water.

Prof. A. J. Cook—Yes, unless it can be secured hard by. In a dish with slatted float, or covered with chips.

Dr. J. P. H. Brown—It is a very necessary factor when breeding. Shallow wooden troughs placed about the apiary.

W. G. Larrabee—Of course, water is necessary, but in most locations it can be had without being supplied by artificial means.

P. H. Elwood—Locate your bees near the water. If you cannot, then take the water to them. I have never found the latter necessary with me.

Chas. Dadant & Son—Yes, but they usually find it, if only from the dew. Supply an inverted jug on a dish covered with a piece of woolen cloth.

E. France—That would depend upon the distance to a supply outside of the yard. A shallow tub, or box with floats in it, is a good water arrangement.

O. O. Poppleton—I have never yet kept bees where they couldn't get what fresh water they wanted from natural sources. I think it is necessary they should have fresh water.

Mrs. L. Harrison—It is. I place tubs such as butter comes in, with a cloth hanging in and out of it. One with water a little brackish; a spoonful of salt to a pail of water.

G. W. Demaree—If there are open pools or ponds of water-brooks or open springs within a half-mile of the apiary it would be a waste of time to water bees by artificial means.

J. E. Pond—I have never so considered it. A good plan for watering is to place shallow troughs in the yard filled with chips or cut straw, on which the bees can rest while taking water from them.

C. H. Dibbern—Yes, it is very important to have water conveniently near the apiary. A beer-keg with a small hole near the bottom, with a quill partly plugged up, allowing the water to drip on a gunny sack, is good.

Eugene Secor—Water in or near the apiary is desirable. If none is near I would supply it. A Mason fruit-jar, or similar vessel, a pine board and a jack-knife are all the capital needed to make an excellent drinking fountain.

Emerson T. Abbott—I think it is. I let my bees drink out of the chicken trough, which is a wooden box with slats over it to keep the chickens from getting into the water. By the way, do you give your chickens plenty of water?

Rev. M. Mahin—Bees, at certain seasons, must have water that the nectar they gather does not supply. If there is not a supply within easy reach, it ought to be supplied. I supply it by filling open-mouthed

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	5lb	10lb	25lb	50lb
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Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
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Prices subject to market changes.

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Italian Queens

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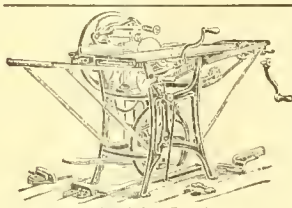

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MR. QUIRIN—Dear Sir:—The queens I got of you last year are giving good satisfaction, better than some untested queens I paid $1.00 for, to breeders who sell for no less at any time of year.
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jars or cans with water and inverting them in flower-pot saucers, putting something under one edge of the jar to raise it up so that air can get in and water get out.

Mrs. J. M. Null—Yes. Practical methods which are at once inexpensive and efficient are constantly found in the bee-papers. Common-sense and necessity will discover a feasible method. "Necessity is the mother of invention."

C. Davenport—Bees certainly require a large amount of water for brood-rearing, and if there is none near, it would be a great help to them to have it supplied near the yard. Throw a quantity of clean corncobs in tubs or barrels, then pour in the water.

J. A. Stone—We think it is, and keep a tub (elevated three or four feet) with a little salt in the water, and the best plan we have tried to keep the bees from drowning is the one Mr. J. Q. Smith told us about—a cloth spread over the top and sagged to dip in the water.

Adrian Getaz—It is necessary that water should be within reach. One good way to provide it is to have a sheet-iron tray about three feet wide and long, and four inches deep. Fill it with moss, and put a bucket of water in it occasionally. The moss furnishes the bees a foothold.

D. W. Heise—If there is no water close to the apiary I would consider it of benefit in early spring. Take planks and bore them full of holes, say one inch deep, with a two or three inch auger, making communications from one hole to the other. This is very cheap, and answers very well.

E. Whitcomb—As necessary as to furnish water to stock in pasture. Use chicken fountains, or jar or can inverted over a block in which grooves have been cut not quite to the outside. Try them and get rid of spring dwindling. Slightly sweeten the water for a day or two to entice the bees.

J. A. Green—Yes As water has always been plentiful in or near my apiaries, I have had no experience with artificial methods. Their preference is for a place where they can sip water without any danger of getting wet, such as the moist soil or gravel along the edge of a stream or pond.

Mrs. A. J. Barber—Yes. A large trough with coarse hay or straw thrown in loosely several inches deep, and then water poured in, is good. The straw, if not too fine, enables the bees to get water and crawl out without getting wet. A leaky five-gallon can to drip on boards is good, but we like the trough best.

R. L. Taylor—Water is necessary for the bees, but they get it from the margins of ponds, marshes and streams. If none of these is convenient, water may be supplied near by in any kind of vessels, furnishing each with plenty of floats of shingles, pieces of boards, etc., to enable the bees to get to the water without danger of falling into it.

A. F. Brown—I have never been situated where there was a total absence of water. Being near the sea-coast (Florida), if my bees cannot get fresh water, they go to the beach by thousands and get salt water. From their anxiety to obtain it I should say it was very essential. In places where it is absent otherwise, they obtain it largely from the dews of night.

E. S. Lovesy—It is, and two of the best methods for supplying it that I know of are: First, take a good-sized pan and fill it with moderately small cobble rocks, then nearly fill it with water. Second, take a keg or small barrel, bore holes in it and stuff rags in the holes just tight enough so the water will seep thru and keep the rags wet. Keep the keg supplied with water.

Dr. A. B. Mason—For the best results it is. In less than one day about the middle of April last, 60 colonies of bees took a ten-quart pail of water that had been sweetened just enough with honey so it could be tasted as sweetened. On other days they would take from two to three quarts of water with no honey in, but in each case some cappings without honey were put on the water for the bees to alight on. A

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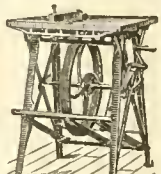

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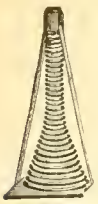

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stone crock or jar is better than a wooden vessel. Some use and prefer a glass or other receptacle turned upside down on a board with creases cut in the board, where the bees can sip the water.

GENERAL ITEMS

Good Honey Crop Expected.

I see by the reports of different bee-keepers that the prospects are very poor for a honey crop this year. Here in southeastern Kansas the bees have had a continuous honey-flow from the time the fruit blossomed. They commenced to swarm the first of May, and swarmed until July 15. I had 17 colonies, spring count, had 17 swarms to issue. I doubled four (making 13 new swarms) and bought two, making 32 colonies now. The honey-flow is good, and the bees are working in the sections. The prospects are that there will be a good honey crop this year in this section of country. The most of the bees are kept in boxes and kegs. It is very wet here now. Some of the grain has been thresht, and some is in the shock and somewhat damaged by the wet weather. The corn crop promises the largest for several years. L. WAYMAN.

Labette Co., Kans., July 22.

Will Not Overstock the Market.

Western Pennsylvania will not overstock the honey market this year. Here is another to thank you for publishing Doolittle's excellent article on price of honey.

W. J. DAVIS, 1ST.

Warren Co., Pa., July 21.

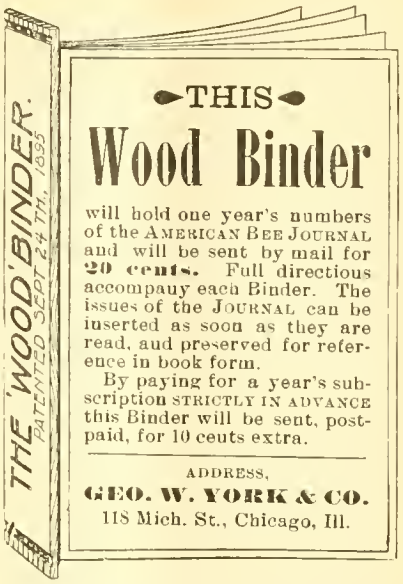
Discouraging Season.

This season is very discouraging to me, as I lost nearly half of my bees last winter. I have not a pound of honey and no increase. Some of my neighbors had some swarms, and lots of honey. I have been keeping bees 10 years, and have beaten all my neighbors every year in honey and increase, until this year. My bees are blacks and hybrids. I lost what Italians I had last winter. Where I live is the coldest place in this country, and those of my bees that weren't frozen to death were chilled. Some of my best queens that were reared last year and proved to be hustlers, are no good at all this year. Not only my bees froze, but some of my farm stock. It is bad luck with me about my bees. W. W. GARDNER.

Fayette Co., Ala., July 17.

Poor Prospects for Honey.

We had a very windy, cold April, and a freeze May 22. March was very mild—fruit, willow and cottonwood all bloomed in March—and bees built up and began to swarm by April, when it turned cold and froze everything, and continued cold and



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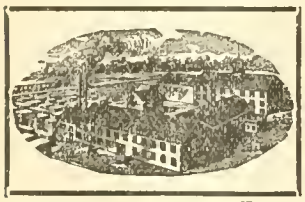

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windy until May 22. Bees became very weak, and a great many died that did not have proper attention.

The mesquite was almost an entire failure for the first time in 10 years. The cause of its failure was the cold spring. Also the alfalfa was a failure until now, and bees are storing some honey from it. The sunflower is good, and another yellow flower that is good will last until November. Its name I do not know; I call it the "Alkali honey-plant."

B. Palam had 194 colonies, spring count, has had only 15 swarms, and has taken only 672 pounds of section honey up to date. He runs his bees in two apiaries about seven miles apart. Other apiaries have done about the same as Mr. Palam's.

I happened in a store in our little village a few days ago, and saw a super of honey on the counter. I lookt in it, and to my surprise it was filled with ½ depth Langstroth frames of nice white honey, but was broken in a few places, and the honey was running out. It had no cover on it except a newspaper. It was covered with flies. The merchant said, "I don't want any more honey; it is running over everything, and is only good to draw flies." I don't know what a man wants to put honey on the market for in that shape, except to disgust the merchant and ruin the price of a good article. W. D. JEFFERSON.

Graham Co., Ariz., July 12.

Clover Almost Nectarless.

Basswood was slighted by bees, and there was not much honey in white clover this year. Last year I wanted surplus honey and no swarms; I got honey-dew but no swarms. This year I wanted surplus and swarms; only about half of my colonies swarmed, and I will get hardly any honey from the swarms this year, but about all my surplus will be from colonies that swarmed and those that did not; something unusual for me. I am shipping my honey this year, and prices are good—20 cents per pound.

I think honey-dew killed the bees last winter. I lost about ¼ of mine.

Richland Co., O., July 24. S. POLAND.

Very Short Honey Season.

I have taken 3,000 pounds of fine, white clover honey. The honey season is very short. Clover is still in bloom, but no honey since July 10. There was clover enough to give 100 pounds per colony, but it did not "give down" till late. JNO. C. STEWART.

Nodaway Co., Mo., July 24.

Hardly Any Honey.

We are in the midst of barley harvest, but ¾ of it was killed by last week's rains, and hot sun at midday. Most of it will do only for feed. I have about 100 acres of it. Wheat and oats are all right as yet, and will be ripe in about a week. There is hardly any honey. C. THEILMANN.

Wabasha Co., Minn., July 24.

Brood Died as it Hatcht.

My apiaries did well until after heavy rains in June, then all the brood as hatcht died with something like paralysis within 24 hours. Being a "tenderfoot" in Texas, it was a new thing in my experience, but on inquiry I found it the same with others. Some said sour pollen caused it; others, poisoned honey, etc.

After close examination I found mine had no pollen, so I went to feeding rye-flour and oat-meal, dampened in straight sun-extracted honey. They had quit capping, and the brood was dying in the comb. They have now quit dying, are capping brood, and going ahead, but I suffered severely from loss, as there is no hive-force to assist the field-force, and a small white-brush flow on, still they bring no pollen to amount to anything. This is no farming country, but the bees have three acres of corn and cane

at home, and a large field of corn within about one mile.

I have had no means to find out to what extent the trouble referred to has run, only right in this neighborhood, running north on the Sabinal river. From my experience so far I think it was caused by starvation from want of pollen, as many of mine had 30 to 50 pounds of honey each in their supers. J. M. McCURDY.

Uvalde Co., Texas, July 21.

Getting No Honey.

We are not going to get any honey at all here this year. It has been so dry, and clover had no honey in it. Only about one-fifth of the colonies have swarmed, as they are hardly getting enough to live on. Unless golden-rod yields well we shall have to feed for winter stores. W. E. VIRGIN.

Merrimack Co., N. H., July 17.

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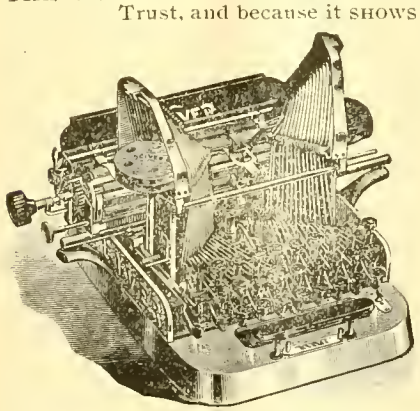

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 19.—A little comb honey is coming and the best white in pound sections brings 13 cents; some of it is not properly sealed and leaks from those few uncapt cells sufficiently to stain the cases and thus detract from its value. Amber grades, 10@11 cents, and dark, 7@8 cents. Extracted, white, 7@7½ cents. Amber, 6@7 cents. Beeswax, 26@27 cents, and sells on arrival. R. A. BURNETT & Co.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & Co.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.
HILDRETH & SEGELKEN.

SAN FRANCISCO, July 12.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Only moderate quantities are arriving of either comb or extracted, with no prospect of the market being heavily burdened with offerings any time this season. Business is mostly of a jobbing character, and for such transactions the market is firm at the quotations. Some extracted of superior quality is arriving from Monterey County.

CLEVELAND, July 22.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & Co.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.
BLAKE, SCOTT & LEE.

BUFFALO, May 5.—The season for honey is about closed. Some extra fancy white would sell at 11@12c; some very poor selling at 6@7c, and dull. No more business in honey before the opening of the ensuing season.
BATTERSON & Co.

OMAHA, July 18.—Altho first receipts of new crop Southern honey were recorded early in June, there has not been any regularity about them since. A straggling lot of comb turns up now and then, and, when quality is choice to fancy, is eagerly pickt up at 14@15c. A little lot of 1898 crop was received a few days ago and went at 13 cents, quality not above choice. For extracted there is not such an urgent demand, still, 7½@8c would be obtainable in a small way. The heavy buyers will hold back until later in the season, expecting to purchase on about the same basis of values as last year. Early shipments of all the comb that can be gotten out is certainly advisable; there will not be any chance of holding out with present quotations after the first demand is satisfied. PEYCKE BROS.

DETROIT, July 15.—No old honey to quote, and no new offered. Prices are liable to rule higher as crop is short. The abundance of rain will no doubt help the crop of fall honey. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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I ARISE

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has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

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Because in 22 years there have not been any complaints, but thousands of compliments.

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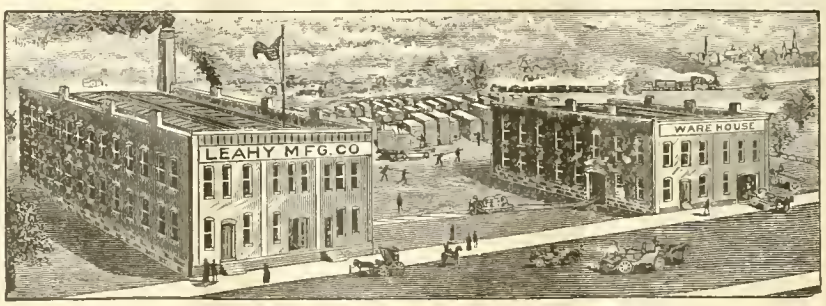

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BEES

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Catalog of Apiarian Supplies, etc., free.

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This is a good time to send in your Beeswax. We are paying **23** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., AUGUST 10, 1899. No. 32.

CONTRIBUTED ARTICLES

A Useful Hive-Tent and Comb-Rack.

BY E. FRANCE.

THE hive-tent is 10 feet square, 7 feet high, with covering made of cheese-cloth. The top is made separate from the sides, and the sides and top are fastened together with snaps and rings, leaving an open space of two inches all around the top to let out bees that leave the hives that we are at work with. The sides come down tight to the ground.

To get in and out of the tent, raise one side high enough to go under by stooping, then drop the side down again.

We use the tent in the spring-time to clip queens, when fruit-trees and dandelions are in blossom, or at any time when the bees will rob, when there is no honey coming in.

To make the frame: The corner posts are made by ripping a 2x4 pine; dress the pieces smooth, then dress off the corners, leaving them 8 square, except 6 inches at the top and a foot at the bottom, which leave square. Bore a half-inch hole in the center of the top of the post down 6 inches, and put a staple near the top to tie the brace-ropes; put another staple near the bottom for the same purpose—to hold the brace-ropes. We use a ⅜-inch rope. Now we want five pieces of good pine, 2 inches wide and ⅞ thick, to go around the top—one of them across the middle to hold up the center of the cover. Bore a half-inch hole thru all of the pieces 1¼ inches from the ends; get six ¾-inch bolts 6 inches long. Lay the 2-inch strips on top of the posts, and drop in thru the strips and down into the posts at each corner, one of the bolts. For the center strip we have a half-inch hole in the middle of two of the side-strips, with a bolt in each end.

We must fasten the tent to the ground. Get four pieces of ⅝-inch round iron 22 inches long; bend one end at right angles 4 inches, and sharpen the other end. Now we want two staples for each post—one about two inches up from the bottom, the other one above it about 6 inches. Leave the staples out far enough to drop in one of the stake-pins, then put your foot on the top of the pin and push it into the ground. Those pins are all that we want to hold the tent, with those brace-ropes inside. Put on the cover and it is ready for work.

The illustration shows the tent with one corner hitcht up on the top of the post. A pretty big hive-tent, but it is none too big for our use. We use a large hive, that holds four colonies, and with four men and our traps to work with, the tent is about right. We used to use an 8-foot tent, but it was too small.

To move the tent, one man at each corner, pull up the pins, take hold of the post and lift it up and walk off with it to where it is wanted; set it down, put one foot on the pin, push it into the ground, and we are ready for work.

The comb-rack is built of 2x4 inch upright timbers, and 1x4 inch boards on the sides. The picture shows the comb-rack to store extracting-combs in during winter. Several Wisconsin bee-keepers that save their combs in this way are able to produce tons of choice honey each in a single season.

Grant Co., Wis.

[See illustration of the comb-rack on next page.—ED.]

Mr. E. France and Hive-Tent.

Barrels as a Honey-Package, Once More.

BY C. P. DADANT.

I SEE that Cogitator does not at all like honey-barrels, and so pokes fun at me for taking the part of the discarded vessel. (See page 453.) But I do not believe that Cogitator has as much experience with honey-packages as I have, setting aside all modesty, of which I have no great

store anyway. I did not write about barrels theoretically. In fact, I don't write in the bee-papers theoretically concerning any point. What I give is from experience of 30 years of daily practice with bees, or honey, or bee-goods. So if you differ from me it is simply because you take matters from another stand-point; but the acquired experience of years cannot be done away with by a few jokes, or a sneer, and even tho I may not be approved by the mass of the readers, I will stay with the assertions previously made by me, that altho tin-cans are a progress, and are very handy in a number of cases, still the old honey-barrel will remain, in many cases, a useful vessel.

Cogitator says that I did not explain how a "glue-coated" barrel could have its staves spread and closed again, and yet be proof against honey soaking as before. I did not think that it needed explaining, because I thought any one might try and *see* how it behaved. The glue fills up the crevices, and their spreading apart does not cause it to break away from those crevices, but it simply shuts together when they are brought together again, and the barrel *does not leak*. Facts, not fiction. The description that Cogitator gives of his trial at opening a barrel simply shows that he will do much better as a tinner than as a cooper.

I have put up honey in small receptacles, both from barrels and 60-pound cans, and when it comes to emptying the honey of five barrels, or of its equivalent in tin-cans—44 to 46 60-pound cans—give me the five barrels with all the fuss of taking out the heads and putting them in again, and with all the little do-funnies of the cooper that so much annoy Cogitator. The 45 tin-cans may be dried on the stove, sure enough—the fact is, I have done it on some of them, but I got sick of it long before I got to the 45th can, and my five barrels did not leak as much as those dried-up cans when they happened to get a little too warm and the solder run off the joints. It is evident that Cogitator had only one can or two, and took his time, and had the stove just right—neither too cold nor too warm—and could give the steam its own time to get out of those cans thru the screw-cap opening.

A good many people succeed at one thing while others succeed at another, and we often pass by a very simple thing without seeing it. So it may be that my way is not the best, but I will tell you all the same how we do when we extract, and Cogitator, or some other man, can tell us of a better way.

You all know that when the honey first comes from the extractor, it is a little cloudy, containing chips of cappings, motes, and probably a few impurities from the hive. It is only after a few days that it gets bright and clear, or at least after a few hours. When we first extracted we had imagined that we could strain it clean at once by draining it thru a very fine sieve. But we soon got over that fancy. The very fine sieve got so stopt up that it would have taken all day to put in ten gallons. So it had to be put aside and an ordinary flour-sieve such as would stop only the large pieces was substituted. The first manufacturers of extractors labored under the same delusion, and we remember that all our early-made extractors were fitted with movable sieves inside of the can which had to be removed because they soon got so stopt up that the honey would not go thru them.

Now, when we put up our honey into barrels the honey settles, and in about two days, if we see fit, we can draw off all but about four gallons perfectly clear. The last four gallons are put in a separate vessel, and in a short time the top is skimmed off and our honey is all clean. If we were to use tin-cans first, last, and all the time, we should have to draw our honey first in a vessel where it would settle before we filled our cans, or we should have more or less skimmings in each can. That is another reason that I had not given before, for our preference of barrels to cans when the honey is first taken off. Of course, large tin vessels may be used instead of wood, and that is only a question of cooper or tinner, but I cannot see how we could go to our out-apiaries with tin vessels and load and unload the crop with as much ease if we used large tin-cans to put the honey in until it settled, as with barrels.

Now another thing: I am ready to assert that there is more loss, on an average, with good tin vessels than with wooden ones, and I see that I have a helper in the same number of the American Bee Journal in which Cogitator's criticism appears. On page 458, Editor Hill is quoted as saying that he "has used a number of carloads of tin-cans as a honey-package, and has found the percentage of loss thru leakage greater than where barrels are used." Thanks, Mr. Hill, for this shoulder to the wheel.

If our tin-cans were always handled carefully there would be little danger, but honey is so heavy an article that the railroad folks are very often displeased when it becomes necessary to handle those boxes containing one or two 60-pound cans, and the result is they are dumpt around with very little ceremony. I have often known a can to become emptied because one of the boards of the box had become unnailed in rough handling, and the nail driven again, but, driven wrong at the next turn, had been brought in contact with the tin. These holes are worse than cracks in barrels.

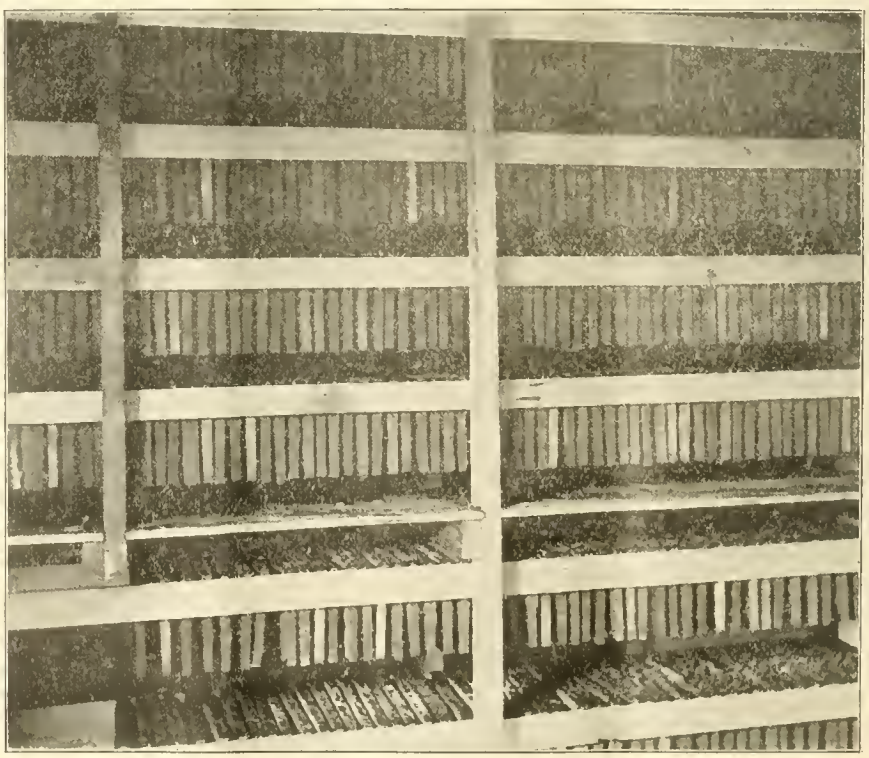
Mr. Editor, pardon me for this long discussion of a subject which is already thoroly ventilated; I wanted to explain my reasons for supporting the use of honey-barrels, and for using them myself, for we are at it again, and the boys have this very day filled two barrels from our home-apiary.

I do not think barrels are an absolute necessity in an apiary, but they do very well as a temporary storing-vessel, and when honey is to be used for baking or for other manufacturing purposes the barrels are not to be discarded altogether, *even as a selling package*. Hancock Co., Ill.

Removing Honey by the Bee-Escape Plan.

BY F. A. SNELL.

WHEN honey is coming in slowly, or none being gathered at the time one desires to take off honey, the bee-escape is very useful or almost indispensable. Near, or after, the close of a honey-flow, bees are very much inclined to rob, so no honey should be exposed. A bee-escape is inserted in a board cleated to give the proper space, and this board or escape is placed under each super to be removed. It is so arranged that the bees can leave



France's Rack for Storing Combs.

the super, but cannot return. In doing this work the smoker is lighted, and with the hive-opener in hand and a few escape-boards we proceed.

The bees of the first hive to be workt with are given a few whiffs of smoke at the hive-entrance, as we do at all times before opening the hive. With the hive-opener we pry up the super to loosen it, and then lift it off, after giving the bees a few puffs of smoke, and place it one side. We then put the escape board over the brood-chamber, and place the super or supers over this. The bees finding they are shut in, and away from their queen and brood, search for a place of escape, which is thru the escape only.

All escapes are put on the hives having supers either for extracting or those used in getting comb honey, but we take one or the other in order. That is, the comb honey will all be taken off before beginning on the other, or *vice versa*. In from a few hours to a day the supers will be rid of bees, depending upon the weather and space above the escape-board.

The supers, when rid of bees, are lifted from the board and taken to the honey-room. The bees at this time should be treated to smoke and kept under control, as the hives are quite apt to be jarred when prying up the super. In this way a large amount of honey may be taken off so quietly that the bees are not aware of the fact, and no excitement or robbing caused.

The escape-boards may be removed as one removes the supers, the bees driven down, and the cover put on the hives, or the supers may all be first removed to the honey-room, and the boards later in the day. With this plan not a frame of honey need be handled in the bee-yard to tempt the industrious bees.

Before the invention of the bee-escape there was no way to take off honey without demoralizing the bees, unless one waited until cool weather had driven them from the surplus department late in the season. This work is much better done now during the warmer weather, when the bees handle to better advantage, and the work is then out of the way.

I have tried all the bee-escapes that have been brought out among bee-keepers, and have only found one among the number that workt well, and that is what we now use, as all others have been thrown away as useless.

At the time of a good honey-flow, either the shake-off or escape plan works well, as no robbing will then occur, anyway. Carroll Co., Ill.

Hunting Bees in Trees During a Honey-Flow.

A SHORT SYMPOSIUM.

IF L. J. Clark will go along streams of water he will find bees gathering water (if there are any bees in the vicinity); then watch the course they go, and it will not be much trouble to find them. DANIEL LOY.

Preble Co., Ohio.

In answer to L. J. Clark (see page 445), in regard to hunting bees during the honey-flow, I would say, go where you have reason to think the bees are, and find them at work on water. When they leave the water they won't circle, but go straight to the tree. Generally they get water at the nearest point, so if you are a mile from tame bees you may rest assured they are wild. If you don't get the line the first time, wait and the bees will come back to the same place as soon as they can unload.

It is a very poor season here; 40 percent loss last winter, and very few swarms this season; small honey crop, and poor prospects for any more. H. L. CASE.

Ontario Co., N. Y., July 14.

Referring to L. J. Clark's call about bee-hunting, I will try to explain to him about my methods. I have traced bees three miles, and have found them in trees.

First, take a box about the size of a cigar-box (a cigar-box will do); cut a hole in the bottom about an inch square, then place two wires thru the box about half way between the bottom and the top, and place the bait on the wire. Then take a glass for a lid, and put it on top of the box. Take the box, and when you see a bee on the blossom, place the hole in the box right over it, then it will go into the box, thinking it can go right up thru. When you have about a dozen in the box take it out in an open field, set it down quietly about four feet above the ground; watch thru the glass lid till they begin to work on the bait in the box, then lift the glass lid, which will leave them ready for their home. Lie right down below the box, so that when the bee starts you can see her circle three or four times. Then she will make a straight line for her home.

The bait is some fresh honey, with about half fresh water with it; make it about half water, so it will be nice and thin, almost like water. To about half a pint of bait add about three drops of golden tincture or ether, and I will guarantee any bee to work on this bait in any time of the year. An empty comb is best to put the bait on. I would like to hear from Mr. Clark after giving this a trial.

Coshocton Co., Ohio. SAMUEL VARNES.

I have read the letter of L. J. Clark, on page 445. I do not know whether I can help him any or not. Bees will sometimes work on honey in the afternoon, even when flowers are plenty. I think I would start them in the afternoon, and they would probably work back on the honey in the morning. If he uses comb honey in his boxes, as I understand from his letter, he might try instead an old brood-comb in his box, and use a little extracted honey diluted about one-third with water.

Bees will not work if caught from buckwheat in the morning; I do not know whether they will from white clover or not.

Oil of anise is generally used to call bees, but it is my opinion it is only of use to aid bees in finding the honey when coming back, by its strong odor. Never put oil of anise in the honey or in the box. Bees will leave immediately. I have found two bee-trees so far, and without hunting them, either.

I have caught five swarms in decoy hives set in the woods. Bees have not swarmed here this spring; it was so dry in April, May and June. I will guarantee I can catch 20 to 30 swarms of bees in any good year.

Dutchess Co., N. Y. GEO. T. RECORD.

I will describe the way I hunt bees in New Hampshire.

First, take some strips of lumber $1\frac{3}{4}$ inches wide, about 5/16 thick, and make three boxes $2\frac{3}{4}$ inches wide, $3\frac{3}{4}$ long, nail a bottom on one. This will be the comb-box. Before nailing the other two together cut two grooves on the inside of each side-piece of the box, one groove near the top, and one near the bottom; then cut a piece of glass that will just fit into the top groove, when you nail the box together. When nailed, fit a thin wood slide in the bottom groove—these are the catching-boxes.

In the comb-box fit a piece of black brood-comb—the old black comb is the best, as it won't soften in the heat of the sun. Take some good granulated sugar and water, equal parts, mix well together, and fill the piece of comb in the comb-box. Get a very small vial of oil of anise, and now you are all ready to start.

Go where the bees are working on the flowers, set the comb-box on a stump or stake—on anything that will be seen by the bees when they "come back." Don't set it too near the flowers (at this time of year). Then take one of the catching-boxes, draw the slide nearly out, take it in the right hand with glass side up; when you come up to a flower with a bee on it, put the left hand under the flower, bringing the box down over the bee, and the left hand up under at the same time; the bee seeing the light thru the glass will fly up against it at once, when you push in the slide, and you have the bee. Go to the comb-box, put the catching-box on top with the slide side down, then draw the slide, put your hand over the glass to darken it inside, and the bee nine times out of ten will at once begin to fill. You can look in the glass and see if she is loading up all right. If so, raise the catching-box gently, and take it off; then sit down and watch the bee go; also note the time, so as to estimate the distance they are from you.

Be sure to put a little oil of anise on the outside of the comb-box, so that when a bee comes back she can smell it. She will be sure to go into the box when she comes back, as the smell attracts the attention more than the flowers.

After a bee has been a few times she will go straight off the box without whirling at all. Then if she is gone so long that you wish to "carry them" and set off again, you will now need your second catching-box. As the bees come back and alight on the comb you must catch them at once, by putting the catching-box over the comb-box. As they fly off to the glass, push in the slide, and you have them. Then take the other catching-box and do the same, and then put the two catching-box slides together, open both slides, and the bees will go into the top one; take the empty one to catch some more off the comb. When you have enough bees, you "go on the line" nearly as far as

you think the time they are gone will take them, allowing 15 minutes for a mile the first time a bee goes, then set off again, and so on until you find them. SUBSCRIBER.

Merrimack Co., N. H.

Noticing the request for information in bee-hunting, I will give my way.

Take honey fresh from the hive, and bees will work it during the months of June, July and August, as well as any other months of the year. Catch in your box from six to one dozen bees, then turn them loose on the honey, and while they are filling catch another box full, and by the time these have filled and returned, one will have a lively time watching them. I have been out twenty times during this month, and the bees have never workt better, altho we have flowers in abundance.

I found my first wild swarm in 1838, and have found over 1,000 bee-trees since. I have started a number of apiaries from wild bees. The bees I now have are all runaways, that is, were taken from the woods, excepting the increase. I let them swarm naturally, yet none run away, nor do I lose any during the winter months.

PREVENTING WINTER LOSS—AFTER-SWARMS.

To prevent winter loss, have the hives arranged so you can examine them at any time. I look mine thru every week during the winter. I opened them the coldest day we had last winter, with the mercury from 25 to 35 degrees below zero, and found them lively and all right.

I close the hive nearly tight at the bottom (contrary to the advice of all experts), and have attacht storm-doors or entrances, then arrange the entrances of the hives so there will be, like a refrigerator, free circulation within itself without outside influence. There will be dry air inside, never will be any dampness among the bees. The dampness and frost, if any, will all be above the cushion and above the bees. This arrangement is for wintering on the summer stands. We had any amount of honey down in this vicinity last season, yet there was no loss in wintering where they were properly fixt on the summer stands.

To make the second or after-swarms nearly equal to the first swarms, have ready a fertile queen, destroy the young queen, and introduce a fertile one ready to deposit eggs. In this way you will gain from two to three weeks.

Calhoun Co., Mich. D. H. METCALF.

The Dickel Theory vs. the Dzierzon Non-Sperm Theory.

BY C. THEILMANN.

AT a bee-convention held in September, 1898, at Salzburg, Austria, Prof. Dickel brought out indisputable facts against the fallacy of the non-sperm theory. He gave the bee-keepers a very simple formula by which they could convince themselves of the correctness of his experiments. For nearly 50 years the Dzierzon theory, based on his observation, and supported by Prof. Siebold's microscopical experiments, was, that the queen has the faculty of laying impregnated and unimpregnated eggs at will. From the first-named, queens and workers develop, and from the latter, drones; and whoever said or wrote anything to the contrary were laught at, or past unnoticed. Nevertheless, I have been convinced of the fallacy ever since July, 1883, when accidentally a colony of my bees gave me a glimpse into their secret laboratory, which is described on page 594 of the American Bee Journal for 1883. Probably not many of the present readers are in possession of it, therefore I will herewith give, in substance, the occurrence:

About the middle of July, 1883, I hived a swarm of full-blooded Cyprian bees on frames with starters; it was a big swarm. The queen was one year old, and one of the most prolific and regular layers I had in my apiary. I hived them about 10 a.m., and they went to work immediately in their new home. The next morning, on examination, I found the colony rather smaller than I wisht to have them for comb honey production, as many bees went back to the parent hive.

Pretty soon a second swarm came out, which I decided to unite with the Cyprians. Knowing from previous sad experience of their sensitive and fighting character, I prepared some peppermint and sprayed them and the second swarm, which I had been shaking before the entrance, while in the meantime I shook the Cyprians from the frames on top of the swarm, and let them run into the hive together; but the fighting began before they were all in, so I repeated the spraying and shaking of the frames, but the killing was still kept going. By this time other swarms came out to be attended to; I gave them another good pepperminting and closed the hive. I was kept busy at swarming and other things until dark.

The next morning I lookt at my Cyprians, and found not a live bee in the hive. On examination I found on two frames new pieces of all-worker comb built about as big as my hand, one of which was filled with an egg in every cell regularly, as far as the cells were deep enough. Some of them had eggs when the cell was hardly ⅛-inch deep. There was not a drone-cell in the two pieces of comb.

After this close examination another swarm came out, which I put into this hive, and they went to work vigorously. About a week after I examined them, and found the frames filled with all drone-combs, except the two pieces above described. The one which had the eggs now had all capt brood, and scattered among it were about 25 drone pupæ in enlarged worker-cells, and three queen-cells, and about 300 worker pupæ. There was not an empty cell in the whole batch, as far as it contained eggs on both sides. There was no other brood or eggs in the hive. This last swarm undoubtedly lost its queen while swarming, and to save their existence they had produced queens, drones and workers from all worker-eggs, and no one can convince me otherwise since I made this experiment. It is evidence that the workers or nurse-bees can, at their selection, produce either sex at will by different food.

I am pleased that Prof. Dickel has found a way to get at the true facts without having to depend upon uncertain, fickle, unreliable analysis.

The formula of Prof. Dickel is this: Take the eggs from a drone-comb laid by a normal queen, and introduce them into worker-comb in a colony that has been queenless long enough to have become somewhat apathetic. The bees will not accept transferred eggs, but tear them out. The development of these eggs will show that workers and queens may be produced from drone-eggs.

Another: Remove from a drone-comb all larvæ and replace with just-hatcht larvæ from a worker-comb, and give the one thus prepared to a colony under the same condition as before. You will then see queens and drones reared from the impregnated or worker-eggs even after they had hatcht out.

Now I hope that many of our advanced bee-keepers and queen-breeders will try the experiments and report results.

In addition to the foregoing I recommend the formula I have under my treatment at present, which needs no artificial manipulation, and which almost any bee-keeper can try. It is as follows:

Hive a swarm with a good laying queen on starters of foundation, in a good honey-flow. Let them build comb three or four days, then take out a frame of all worker-cells, stockt with 300 to 500 eggs, and give it to another just issued with a clipt queen. Cage the queen and lay her at the entrance of the new hive with the frame of eggs, and the rest filled with empty frames placed where the old hive stood, and where the swarm came from. The bees will come back to their queen and cluster about her. Let her be caged until sundown, then take her away and drive the bees into the hive; they will find the eggs before the next morning, and will stay and make use of the eggs as their instinct directs them, to save their existence, and in due time you will find queen, drone and worker pupæ in the comb that was all worker-cells stockt with eggs of a fertile queen when given to the queenless swarm. Try this and convince yourselves of the long-disputed non-sperm theory in drone-eggs. Wabasha Co., Minn.

A Lecture on Controlling Sex in Bees.

BY PETER BOIS.

BEE-KEEPERS are able, in a measure, to regulate the production of drones in the hive, and cause the queen to produce almost entirely worker (female) bees, with but a small percentage of drone or male bees. This is effected to some extent by having almost all worker-comb in the hive and only a small amount of drone-comb. And I consider that bee-keepers have paid more attention to this matter of the production of sex, and that they have obtained better results than the breeders of other stock generally. I have been able to keep my colonies for several years past from swarming, and producing but very few drones per hive, while in worker-bees or female nurses my colonies

have been exceedingly strong. This has been achieved by noticing that drones were produced, and swarming also, when the queen in full "lay" received severe checks; these "checks," at such a time, I distinctly noticed, produced drones or male bees, while freedom from checks, which enabled a queen to go thru her laying season, produced female or workers only, with but very few males. If, therefore, bee-keepers can govern the production of males at will, the breeders of other stock ought to be able to do the same if they know the law that affects the produce of male and female.

Fowl fanciers can induce birds to lay very early in the season, and ensure that a fair percentage of the eggs are fertile; but such eggs mostly produce cockerels, and the more fertile the hen the greater the percentage of cockerels. Now if we notice that checks are much more likely to be produced early in the season, when the weather is more variable than later on, and that these changes of temperature would chiefly affect the fowls whose ovaries were the most developt, we get at the reason why eggs set early produce a preponderance of male birds.

The queen-wasp gets in full "lay" more towards the fruiting part of the year than does the queen-bee, and at such time cold nights begin to set in, and greater atmospheric changes take place than during midsummer. This has the effect of causing her to produce some drone-eggs while she laid only worker-eggs previously. Animals generally are more equal in the production of males and females than bees and wasps. On the other hand, the queens of bees and wasps, altho their ovaries are far more largely developt than those of other animals, and would be thereby more liable to be affected by checks, yet they are better protected against outside influences than animals generally.

The mother-bee, like the mother-wasp, is in the midst of a full colony of her own progeny, which becomes an increast protection in proportion as the maternal ovaries become developt; secondly, they are fed with a food that can be made to produce but little variation in its influence; thirdly, they have the protection of the combs to guard them against sudden changes of temperature, and the combs of each of these insects, altho so widely different in the material of which each is composed, yet both are recognized as among the best non-conductors of heat and cold; fourthly, the hive in which they breed is so protected from extremes of temperature as to retain the warmth of the brood-nest in a very great degree while the queen-bee is extensively employed in egg-laying.

Other animals, while less fertile, are at all times far more exposed to outside influences, and this may in some measure account for their producing a more equal number of males and females than the two insects cited. I infer, therefore, from these observations, and others of a like nature, but all giving indirect evidence, that checks can, and do, affect the production of sex in the egg prior to fertilization, or at the time when the egg is ready for that purpose. More direct evidence, however, could, I think, be obtained by experimenting with the eggs of animals, such as frogs and fish, whose eggs are fertilized only after being laid.

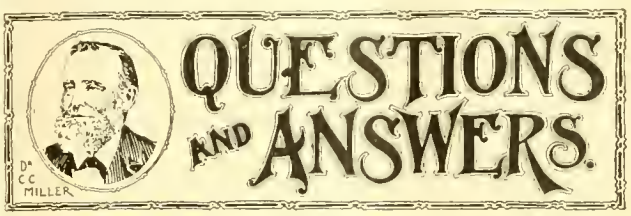
The law which appears to govern the formation of sex—so far as checks are concerned—may be stated as follows: An egg which is fertilized free from check produces a female. In other words, a female is formed from an egg that has received no check in its fertilization when (or just prior to) being fertilized.

The following rules may also be stated with reference to the working of the law just cited: (1.) A female (mother) may be predisposed by anterior checks to produce males. (2.) A recent check exerts its greatest force, if received when the ovaries are nearing (or have just reacht) their greatest development for egg-production. And, also, the more the ovaries have been favored towards extensive development, by prevailing favorable conditions, the greater is the effect in the direction I have indicated.

The eggs laid by a virgin queen clearly show the effect of an absolute check in producing males. When these eggs were ready for being fertilized, none of the elements necessary for the purpose were present; and they therefore received an absolute check, so far as fertilization, but possessing of themselves the necessary vitality to produce bee-life, but males only.

The eggs of a fertile queen-bee are free from check, and in consequence produce females. On the other hand, when she lays eggs that have received an absolute or extreme check, they are non-fertilized, and produce males that resemble the mother only. She also lays eggs that have received a check sufficiently powerful to prevent them forming females, but that admits of their being fertilized with male semen; then they produce males in more or less degree resembling both parents. This latter case, which had not hitherto been solved, presents new interest, not only for the explanation it affords of the effects produced by the check described in the present instance, but because the effects of this check are also common to the eggs of animals generally. The effects produced by this check are therefore important to breeders of farm stock, or of domestic or pet animals, and also to fish-breeders as well as to bee-keepers; in fact, in every case where it may be desirable to specially produce females or males of any variety.

To control the formation of the sex in the egg at will is a science of itself, and some of the details to be attended to must be special to, and necessarily vary with, the kind of stock dealt with.—British Bee Journal.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

When Clover Yields Nectar.

On page 396, you say that white clover bloomed May 20. June 6 you were despondent on account of the failure of clover to secrete nectar. Is it not an accepted fact that clover does not yield nectar until it has been in bloom 10 days? TENNESSEE.

ANSWER.—I don't know that I ever saw it stated as a generally accepted fact that clover does not yield nectar until it has been in bloom 10 days, but it has been a fact according to my own observation. What troubled me was that the bees did *not* begin to store nectar within 10 days after the first bloom appeared. Neither did it begin for some time after that, when the bees began to be excited over the harvest. But that soon died out, and the entire month of June past away with empty supers, some colonies during that time being at the point of starvation.

A Bunch of Six Questions.

1. I ordered a queen and introduced her; she did not lay more than a dozen eggs, and swarmed out after being in the hive 10 days. The bees settled and remained 15 minutes, and returned to the hive, but the queen did not return. It was a 4-frame nucleus, and well filled with bees. What was wrong with the queen? She was ordered for a tested queen; the breeder sent another one in her place.

2. I had two queens sent me the other day, arriving the next day after being mailed. In one cage the queen and all the bees were dead but three, and in the other the bees were all dead, and the queen could just crawl; she died in a few hours. They were not daubed up with candy, but seemed to be clean and dry. What was the trouble?

3. I live on an elevated place. I have my bees in a row facing the south, hives 20 inches apart, and a shelter over them 6 feet in front and and 4½ feet behind, and of course that runs the water off. At the back end, or north side of this shelter it is banked up to the roof to protect them from the north wind, as it would have a far sweep at them otherwise. Last winter it was very cold, and out of 43 colonies I lost 20, some being my strongest colonies, that froze or starved, as you may call it, but there was plenty of honey in the hives. There was frost in the inside walls of those hives. Nine colonies froze and 11 died of dysentery. Would you advise me to put my bee-hives in pairs, and pack them from now on? If so, when shall I pair them, and pack them, and how shall I pack them? It is not often we have such winters as last.

4. If I do not pack my bees would it not be better for

me to pair them? I lose a good many queens by trying to enter the wrong hive.

5. Would it be best for me to leave entrance open the full width of hive during winter, or close some of it up? I use an 8-frame hive 12 inches wide.

6. When there is a heavy snow on the ground, and the sun shines out, it makes my bees fly out and the cold wind strikes them down. They fall in the snow and chill. Would you shut them in the hives to prevent their coming out at such times? ALABAMA.

ANSWERS.—1. I don't know. It isn't certain that anything was wrong with the queen. Indeed, a queen that had life enough to swarm out would be considered all that you ought to expect of a dealer, and he did more than his full duty in replacing her.

2. Hard to tell without knowing more about it. Perhaps the candy was too dry, and hard.

3. The probability is that in your lifetime you'll never again see such another winter in the state of Alabama, and that your bees will winter just as well as in the past. Yet it might be no harm to pack hay, straw or other material in the shed.

4. It is a good plan to have the hives in pairs, making less danger of losing young queens. Move the hives together every few days, a few inches at a time.

5. Leave it open full width.

6. Put up boards to shade the hives, so the sun cannot shine in. But don't shut the entrance.

Unsealed Brood.

I have three swarms which were hived in June, each having a good queen and abundance of honey, but about one-half of the brood that ought to be sealed is unsealed. I do not know if it ever was sealed and was opened, or if it never was sealed. Nevertheless, this brood which ought to be sealed is in the state of a fully-developt bee, or nearly so; the head and feelers are from a white to a pink hue, and eyes are light brown in color. The other brood that is sealed looks healthy, and so does the unsealed larvæ of all ages. Brood-rearing seems to go on as if all was in the most healthy condition. WEST VIRGINIA.

ANSWER.—You probably have a case of what is sometimes called bareheaded bees. The brood matures and the bees hatch out all right, but there is no capping. It is not certain what is the cause of the trouble, but I have a suspicion that it is caused by the wax-worm. What makes me think so is that it often happens that a row of these bareheaded bees appear in a line very much in the same shape as the gallery of a wax-worm. It only appears in small patches, or streaks, and if you have a case in which all the brood on the whole side of a comb remains unsealed, you have something I never saw nor heard of.

Queens from the South—Apis Dorsata, Etc.

1. Do you think that queens from Texas stand the winter here as well as queens bred farther north? I have lost all the queens I have introduced from there. They die thru the winter in chaff hives.

2. Do you know who has any Apis dorsata queens for sale?

3. From which can the bees gather the most honey in a day, basswood or clover, each having the same chance?

4. Do the bees kill off the drones after swarming is over? NEW YORK.

ANSWERS.—1. The general testimony seems to be that there is no difference in the hardiness of queens reared North and South.

2. The only Apis dorsata bees that have yet been offered for sale in this country are offered at 10 cents each by the A. I. Root Co., but they are not queens but workers, and they are preserved in alcohol. You may be pretty sure that when Apis dorsata queens are offered for sale alive in this country you will see prompt and prominent mention of it in this and other bee-papers. But don't set your hopes too high on stocking up with that kind of bees. If you had a queen of that kind, I don't believe you could get her to work in a colony of Italians or blacks. If you had a full colony of Apis dorsata bees, it is not at all likely you could get them to stay in a hive. No case has yet been reported in which any one has been successful in getting them to stay in a hive. Their nature is to have a single comb hung to the limb of a tree, and the probability is that bees that naturally build a single very large comb in the open air will never submit to be shut up in a hive with several little combs. If you had a colony hanging to a tree as in their native land, it is not at all likely that you could by any possibility get them thru the winter in New York State.

3. According to reports given, the probability is that basswood would lead a considerable distance. Possibly two to one.

4. Sometimes, and sometimes not. There is no very sure rule as to the time drones are allowed to live, except that when a scarcity of pasturage occurs they must get out of the way, but all colonies are not alike as to that. Yet a colony with a good laying queen is not likely to support a lot of drones when no honey is coming in.

Joining Associations and Attending Conventions.

1. Which bee-keepers' association would it be best for me to join?

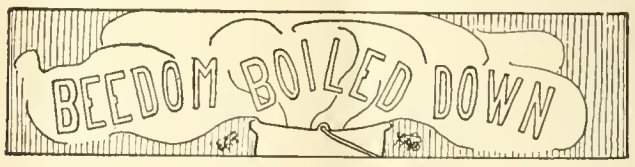
2. Do the lady bee-keepers attend the bee-conventions? I would like to go to the one at Philadelphia, if I can go.

3. I see the Central Texas Bee-Keepers' Association extends a cordial invitation to all bee-keepers, and says there will be no hotel bills to pay. Will it be that way at Philadelphia? NEW JERSEY.

ANSWERS.—1. The United States Bee-Keepers' Association.

2. Ladies attend and are heartily welcomed. If possible, you ought by all means to attend.

3. No; the members attending the convention at Philadelphia will each one pay his own bills, but reasonable rates are always secured.



Pollen in Queen-Cells I had been taught to believe a sure sign of hopeless queenlessness. I think I've seen a number of exceptions. June 26 I met a plain case. In one of my "barns" I found on one comb three enlarged cells containing pollen, with the queen laying, and all going on prosperously.—Gleanings in Bee-Culture.

"The Queen of the Honey-Plants! Do you know it? If such is the case, you know of sweet clover or melilot. If you know of one better we shall be glad to hear of it." So says the editor of Bee-Chat. He says sweet clover is the only thing that will grow on salt marsh and reclaim it, so on the 4½ acres of sweet clover he has sown he has applied a ton of salt, a ton of ground bones, and 150 loads of farmyard manure. He sows 14 pounds of seed to the acre.

House-Apiaries, after some experience, are highly esteemed by A. H. Duff, as he relates in the Bulletin of Kansas University. "Any old house" will answer him for a house-apiary, but when specially constructed for the purpose he favors a small building 10 feet long, 6 feet wide, and 6 feet high, containing 11 colonies, 5 on each side and one at the end. He thinks this better than longer buildings, for in such the colonies near the ends get more than their proper share of bees at the expense of the central ones. In these small buildings ordinary hives are used, standing two inches from the wall.

To Paint or Not to Paint Hives? is a question discust in the Progressive Bee-Keeper by Messrs. Doolittle and Aikin. Mr. Doolittle has said that he would not allow any one to paint his hives if the painter would give a dollar each for the privilege of painting them. Mr. Aikin replies that in the dry climate of Colorado unpainted hives, or any other thing made of wood, can scarcely be held together unless well painted. Put the best of lumber in a hive-cover, and let it be exposed to the sun for a year, and it will not hold water. Needless to say keep the hive in shade, for trees are too scarce in that country. But he says that bees *may* winter better in unpainted hives, for the lumber warps

and splits in the scorching sun and dry air, and the bees have so much ventilation that they winter well, and the air is so dry that 20 to 40 degrees more of cold can be endured than in a moister climate. His plan, however, would be to paint well to preserve the hive, then provide proper ventilation. Doolittle, while admitting that in Colorado he might paint, still thinks it would be better and cheaper to leave hives unpainted, then protect by means of a shadeboard covered with a sheet of 20x28 tin, allowing the air to pass freely between the cover of the hive and the shadeboard.

Acid for Cleansing Beeswax.—It is generally known that acid is used in cleansing wax from old combs, but details of the matter have not been very freely given. The following specific information is given in Gleanings in Bee-Culture:

"The acid we use for refining beeswax is sulphuric—the ordinary commercial article. It should be reduced in water from 50 to 500 times. If the wax is then boiled in this water, or heated by a steam-pipe, and then allowed to stand for a few hours, it will turn to a bright lemon yellow. The amount of acid to be used will have to be determined by experiment. If you reduce it to one in a hundred, and then keep reducing as long as you can get the clarifying effect, you will get the proper solution."

Large Hives in Canada.—J. Canuck, in Gleanings in Bee-Culture, advises that in trying large hives they shall not be occupied by colonies with queens that have been bred in little hives for generations. He is disgusted with the statement of queen-breeders that good queens should fill eight Langstroth frames with brood before the honey-flow, and says:

"Why, Mr. Editor, at this date, May 9, I can show you lots of colonies in 'barns' with 9 and 10 frames filled with brood from one end to the other (frames considerably larger than the Dadant-Quinby,) and the hive boiling over with bees, and we have had a very backward spring—first pollen noticed April 18, and fruit-bloom just beginning to open. As you are aware, our honey-flow does not start for nearly a month, so you can see what, in my opinion, constitutes a good queen."

Large Hives.—As bearing upon the large-small-hive question, J. N. Harris gives an interesting contribution in Gleanings in Bee-Culture. It seems that hives too large are not desirable, 12-frame hives in his case being the happy medium. His figures make an interesting study. He says:

"I put into winter quarters 241 colonies in three apiaries, all in single-wall hives. They were wintered on the summer stands with no other protection than chaff in upper stories, and tight-board fences about the yards. They were in four sizes of hives on Langstroth frames:

37 colonies in	8-frame hives,	winter loss,	8
16	"	in 10-frame	"	"	0
156	"	in 12-frame	"	"	9
32	"	in 16-frame	"	"	13

AVERAGE AMOUNT OF BROOD PER COLONY, APRIL 25.

8-frame hives	.....	3	frames of brood.
10-frame	"	$3\frac{3}{4}$	" " "
12-frame	"	5	" " "
16-frame	"	$2\frac{1}{3}$	" " "

"It will be seen by the figures that I had the best success wintering in the 12-frame hive, which is my favorite size.

"The most of the 8-frame and all of the 10-frame hives were in the yard where the bees wintered best. I have always had fair success wintering in the 16-frame hive until last winter. The previous winter I had 103 colonies all in large hives, and lost but one colony."

Bees Breeding in Winter.—Dr. Mason said in the Bee-Keepers' Review that his bees bred in the cellar, and he believed they were stronger Jan. 21 than when put into the cellar in November, and not a sign of disease. Mr. Theilmann, in the American Bee-Keeper, thinks this is the first time any one has claimed that bees were stronger in January than in the preceding November, and hints that there may be some mistake about it. His own experience is that bees seldom breed in the cellar in December, and those which commence breeding in the latter part of January are pretty sure to have diarrhea before March 1. At one time he had a remarkably good opportunity to learn the amount of brood present in January, and relates the following:

"About Jan. 25, 1885, my bee-house, in which were 87 colonies, was burned. Altho the hives were saved, the bees, with the exception of three colonies, were smothered with the smoke. Upon examination of the combs I found 48 colonies had more or less sealed brood or eggs; five of them had brood in five frames; two had brood in four frames; 17 had larvæ and eggs; 24 had eggs only. The remainder had neither brood nor eggs. All the combs were nice and clean, and there was no sign of disease. The temperature had been about 40° most of the time before the house burned."

It must be remembered, however, that bees wintered out-doors begin breeding earlier than those in the cellar.

Color of Honey.—Prof. Hunter's pamphlet gives photographs of six samples of honey in test-tubes. Beginning with the lightest, they range in shade as follows: 1, alfalfa and melon bloom; 2, white clover; 3, alfalfa; 4, basswood; 5, sweet clover; 6, knotweed. I suppose there's no little variation in different localities as to the shades of honey. Certainly I have always considered alfalfa lighter than white clover, but here it is darker. And is basswood usually darker than white clover? [The color of extracted honey from the same source varies greatly in different localities, and varies in the same locality in different years. Alfalfa, as a rule, I think, is lighter in color than white clover; basswood is generally a little darker, but only slightly so. Sweet clover is a little darker, on account of having somewhat of a greenish tinge. Knotweed or smartweed ought to be clast as amber, altho I have seen some samples that were very light-colored.—ED.]—Gleanings in Bee-Culture.

The Best Hive for Extracting.—J. M. Hambaugh was for years a neighbor of the Dadants, and adopted their style of hive with its large frame, so favorable in his opinion for successful wintering. Having settled in California, a change of conditions has allowed a change of preference, and he says in Gleanings in Bee-Culture:

"In starting anew here in California, with no wintering problem to solve, in the adoption of a frame that meets the requirements both of the bees and of the apiarist, I have adopted the regular standard Langstroth, and a hive to accommodate 10, and my reasons are:

"1. Its convenience in handling, and being nearest universal.

"2. Its size is as large as we dare to combine the feature of surplus and brood.

"3. Its best adaptation to combs when transferring.

"4. A case of 10 combs filled with honey is sufficient for the average man to lift, which is quite an item during the extracting season."

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 50 cents; 50 for 70 cents; 100 for $1.25; 250 for $2.75; 500 for $4.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. AUGUST 10, 1899. NO. 32.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Removing Comb Honey from the hives is quite a job for some bee-keepers, a few even not liking the bee-escape method. We have mentioned it before in these columns, we believe, that Dr. Miller uses a large wire-cloth pyramid sewed over a hole in a piece of heavy cloth larger than to cover a super, so that the edges can hang over. He then piles up eight or ten supers full of honey, and puts the escape on top of the pile, leaving it there until the bees have gone up and out thru the escape.

We found a good plan is to lay a regular bee-escape board crosswise on top of an empty super or box on the ground, which leaves an open space at each side of the escape-board. Then pile on the supers of honey from several hives, and on top of all invert another bee-escape board. We have done this towards evening, and by the next afternoon all the bees were gone back to their hives, and the honey was removed just as you would take bricks out of a wagon-box. By using two escape-boards the bees can go both ways—out below and out at the top of the pile of supers. It works splendidly, and by this method only a few escape-boards are needed in an apiary of quite a good size.

The Philadelphia Convention will be in session in less than one month. The time is short. We would be glad to announce the names of those who expect to be present, especially the ones who come from a distance. It is nice to know in advance who expects to be there, and it might also induce some hesitating ones to decide to attend. It is worth much to meet the leading bee-keepers of the country.

We felt well repaid for attending the Buffalo convention two years ago, where we met so many splendid bee-keepers, among whom we might mention P. H. Elwood, Capt. Hetherington, and G. M. Doolittle, of New York; R. F. Holtermann, F. A. Gemmill and D. W. Heise, of Canada; J. F. McIntyre, of California; F. Danzenbaker, and many, many others that it was a delight to meet and talk with. It is always an inspiration to meet in annual convention so many who have contributed so much toward the progress and success of bee-keeping in this country. We trust that just as many of our readers as possibly can do so will arrange to be present at the Philadelphia meeting, Sept. 5, 6 and 7.

LATER.—Since writing the foregoing, we have received a letter from Secretary Mason, in which he says:

"Mr. Hahman, of Philadelphia, writes that they expect a large gathering, and applications are being made for entertainment as per request in the American Bee Journal, and I presume many more will send in when they get the notice in the August bee-papers."

If you have not already done so, and you are going to attend the convention, write *at once* to Mr. Hahman, Harrowgate Lane, Sta. F., Philadelphia, Pa., and he will engage a room for you. Mr. Hahman is secretary of the Philadelphia Bee-Keepers' Association.

Honey in Hotels.—One cannot help wishing that honey might be more commonly found on hotel tables in this country, upon reading in Ostdeutsche Bienenzuchterei that the use of honey has become a need to the traveling public, so that the hotels in many regions, especially hotels of the better class, find themselves obliged to serve honey as well as butter, making no little demand thereby.

The Leisure of Bee-Keepers is a thing that F. L. Thompson, writing for the Progressive Bee-Keeper, thinks should be carefully guarded. The business is such that at certain times in the year there is little or nothing a bee-keeper can do, and at such times he protests against the time being put in at peddling honey under the plea that because one man has made a success at peddling another can. His idea is that instead of so much talk about cultivating the home market, the honey-trade should go thru the usual channels, for people go to the groceries for their food, and the groceries go to the wholesale houses for their stock. Short cuts should be also studied, so as to have more leisure, "that is, the opportunity for disinterested activity."

The Kingbird a Bee-Enemy.—A. J. Wright, the man who made the remarkable statement that some animals see by means of rays of dark instead of light, having been criticized for it, makes reply that after much observation he is "convinced that many animals can see perfectly *only* in total darkness." However wild his views may be on that point, he gives in Gleanings in Bee-Culture some very interesting observations with regard to the kingbird. A report of the Secretary of Agriculture made out the kingbird as innocent, because the stomachs of 171 kingbirds were collected in 19 States, Canada, and the District of Columbia, and only 14 stomachs contained any traces of the honey-bee, and a total of only 50 bees were found, and of these only 4 were workers.

Then Mr. Wright gives a very interesting account of his own investigations. At six in the morning, when no drones were flying, he shot a kingbird right among the bees after seeing him capture six of them. Cutting the

bird open, he found no trace of a bee in any part. Then at two, when drones were plenty, he tried it again. After seeing a kingbird capture ten or more bees, he shot it and found in the first stomach one drone and nothing else, and in the second stomach fragments of insects, but nothing could be classified. Mr. Wright says, "You may shoot kingbirds all day, and the chances are '16 to 1' that you won't find a worker, and rarely a drone, in the stomachs of the entire lot."

The seeming mystery of so many bees being caught, and so few found on dissection, is thus explained:

"This bird seizes a worker, which he much prefers to a drone, by the abdomen, giving the bee a few smart raps against the perch. He then passes the body of the bee its entire length transversely between his upper and lower mandibles, by a peculiar motion of the latter. This is continued until the juices are thoroly extracted, when he opens his mouth and *drops* the useless carcass to the ground. No wonder, then, that we failed to find workers in the stomach. But how about the drones? Well, when a drone is seized he is swallowed at once; and when several have been taken into the first stomach the bird sits quietly on the perch for half an hour, sometimes longer, when by a few motions of the neck, the casting is brought up. This is about the size and shape of an ordinary pea, and consists of the hard, indigestible portions of insects."

The Illinois State Fair will be held at Springfield this year, Sept. 25 to 30. The list of cash premiums offered on bees, honey, etc., are as follows, being "open to the world" for competition:

	1st. Prm.	2nd. Prm.	3rd. Prm.
Display of comb honey	$20	$15	$5
Collection of labeled cases containing 12 or more pounds of white honey from different flowers	8	5	3
Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers	8	5	3
Case white clover comb honey, 12 to 24 pounds	4	3	2
Case basswood comb honey, 12 to 24 pounds.	4	3	2
Case amber comb honey, 12 to 24 pounds	4	3	2
Display extracted honey	20	15	10
Display of honey extracted on the grounds	5	3	2
Frame of comb honey for extracting	5	3	2
Display of candied honey	20	15	10
Display of beeswax	12	8	4
One-frame observatory hive dark Italian bees	4	3	2
One-frame observatory hive golden Italian bees	4	3	2
One-frame observatory hive Carniolan bees.	4	3	2
Honey-vinegar, ½ gallon, with recipe for making	4	3	1

The judges in this lot will be governed by the code of rules adopted by the Illinois State Bee-Keepers' Association.

Five hundred pounds will receive full score for quantity in displays of comb and extracted honey. Fifty pounds will receive full score for quantity in display of beeswax.

There is a total sum of $268 offered in the above list, which should call out a good display from the bee-keepers of Illinois. The State Fair authorities have for several years allotted a splendid space for the apiarian exhibit, and have been generous in their cash premium offers. Mr. H. J. Cater, the superintendent of the apiary department, has also done his best for the interests of bee-keepers ever since he has had charge of the work. The honey-producers of the State should encourage him to do even better by making this year the largest and finest exhibit ever shown.

"Stands" for "Colonies."—In one of the bee-papers for June we find a question askt in regard to "preventing increase in the number of stands." This would have been easily answered by advising the purchase or manufacture of a less number. A "stand" now means the wooden frame or foundation upon which the hive proper rests, tho the querist evidently used it to mean "colonies." It is a good thing sometimes for editors to help their correspondents to get things straight.

The Pennsylvania Lines is perhaps the greatest railroad system on this continent. It is also the direct route from Chicago to Philadelphia—where the United States Bee-Keepers' Association will hold its 30th annual convention next month, Sept. 5, 6 and 7. Less than a month yet, and then there should be assembled the largest convention of bee-keepers ever held on this continent.

On the Pennsylvania Lines the round-trip fare from Chicago will be only $16.45, being one cent a mile each way, as it is just 822 miles from Chicago to Philadelphia. The reason of this low rate is the 33rd national encampment of the Grand Army of the Republic, which meets at Philadelphia Sept. 4 to 9. Tickets will be on sale Sept. 1, 2, 3 and 4, inclusive.

The editor of the American Bee Journal and Dr. C. C. Miller expect to go on the Pennsylvania Lines, leaving Chicago at 3 p.m., Monday, Sept. 4, arriving in Philadelphia the next day about 6 p.m. Now, why cannot a large company of bee-keepers from the West arrange to go on that same train? We will see to it that splendid accommodations are secured for all who will notify us in time that they will go over the Pennsylvania Lines from Chicago.

Next week we will have more to say in regard to the trip to Philadelphia. In the meantime, if further information is desired, write to Mr. H. R. Dering, the affable Assistant General Passenger Agent of the Pennsylvania Lines, addressing him at Chicago, Ill.

Talking Bees to School Children.—On page 360 we mentioned having given a bee-talk to the children in the eighth grade of the McPherson school, who were under the careful instruction of Mrs. Lane. Referring to this rather "new thing," Stenog in Gleanings in Bee-Culture offered this encouraging remark:

The following is clipt from the Chicagoan of May 27:

"A rare treat was given to the eighth-grade pupils of the McPherson school last Thursday, when Mr. George W. York, editor of the American Bee Journal, gave them an illustrated lecture on bees. The pupils were delighted, and the way Mr. York described the simple animal was truly wonderful."

Mr. York says his reason for copying the item was to suggest that bee-keepers in other cities will find the school children greatly interested in a talk on bees if given a chance. He had a Langstroth frame of bees in a glass hive, and gave therefrom a practical illustration of the work of bees in the hive. That is a grand idea, and ought to be carried out wherever possible. Mr. York deserves the thanks of all for taking the initiative step. The children were to take notes and print them in their little school-paper. "A chiel's amang ye, takin' notes; an', faith, he'll prent it."

Well, the result of the "takin' notes" is the following, written by Miss Anna Sundberg—a pupil 15 years of age—who also drew the pictures that are shown, all of which appeared in the school's June paper, called "The McPherson:"

BEES.

Thursday afternoon Mr. York was in our room and told us a great many interesting things about bees.

There are three kinds of bees, the queen, the workers and the drones. The queen is long and narrow. She lays all the eggs in the hive, but never gathers honey nor goes where the surplus is stored. Her food consists of a finer quality of honey, called royal jelly.

The worker is like the queen in every way except two. The first is that the lower part of its body is shorter, and the second is, that its work is different. It gathers the honey and pollen, which it stores away in the cells.

The drone is larger and broader than the worker. It does nothing but eat and sleep.

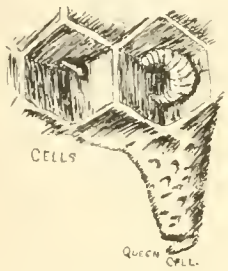
The pollen is stored in the lower part of the hive, and

here the queen lays her eggs. One egg is put into each cell. After the egg has been laid and food put in for the larva, the workers plaster up the opening of the cell. There is some difference in the covering of the cells. Those of workers are flat, while the drone-cell caps resemble a mass of bullets, and the entire queen-cell is different. Her cell looks like a bag, and is shaped somewhat like a peanut. A few days after being laid each egg is transformed into a small, pearly-white larva.

The queen develops in 16 days, the worker in 21, and the drone in 24.

The workers seldom lay eggs, but when they do only drones are produced.

Bees will gather honey for several miles around. The bee flies around the hive several times before it leaves, and



when it comes back it flies to a certain height, and then in one straight line to its home.

The drones have no stings. The worker dies after using its sting, and the queen only uses hers in killing a rival, if she has any.

There are about 40,000 bees in a hive, and a strong colony of bees will store about 100 pounds of honey in a good season.

When the hive is overcrowded, the queen and a great many of the workers fly away and settle on the branch of some tree. This is called swarming, and causes a great deal of excitement in the hive when it happens.

ANNA SUNDBERG.

When it is known that the foregoing was written entirely from memory, after hearing the bee-talk, it will be all the more surprising that "Anna" was able to get the "story" so nearly correct in every particular. We think she also did well in making the two illustrations.

We hope it may all help to encourage others to try the experiment of taking bees into the school-rooms, and telling the children about their (the bees') wonderful habits and work.

MR. WM. M. WHITNEY, of Kankakee Co., Ill., wrote us July 29:

"My bees are booming. I have already taken over 70 pounds from each of some colonies."

* * * * *

MR. E. S. LOVESY, of Salt Lake Co., Utah, wrote us July 31:

"In some favored localities the honey-flow appears to be all right, but the rule is otherwise this season, ranging from one-third to two-thirds of a crop."

* * * * *

FREIFRAU V. BERLEPSCH died March 29, 1899. She was the widow of Germany's greatest writer on bee-culture, Baron v. Berlepsch. She is said to have assisted the Baron very materially in his literary work. Since he died she has always taken active part in the bee-keepers' gatherings. Dzierzon and Freifrau v. Berlepsch have characterized the Wanderversammlung for many years.—American Bee-Keeper.

RAMBLER (J. H. Martin), in Gleanings in Bee-Culture, gives a temperance lesson that is worth repeating. It seems in his ramblings he was compelled to stay over night at a hostelry that had a saloon attachment. There must have been a lively time, for he says:

"During the struggle between the men and the beer-bottles I made my escape to a barber-shop. Here I found a congenial artist, and we straightway fell into conversation upon the hard times and the scarcity of money.

"'Say, stranger,' said he, 'I have just had my eyes opened about the cause of hard times during this Thanksgiving. We have three saloons here, and each one of them puts up turkeys for a raffle. The poor laboring men all rush in and raffled away their money, some individuals as much as $5.00, and then getting no turkey; and (do you believe it?) the saloons in this little one-horse town cleared $100 each. I used to do just such things; but a few years ago I *found myself*. Talk about hard times! just banish the saloon and you would see the best times on record.'

"I fervently said, 'Amen!'"

There would be no hard times in many homes if the cursed and cursing saloon were banisht. "The saloon must go" before most of the poverty and suffering of this world leaves.

* * * * *

MR. R. G. HAWN, of Kittitas Co., Wash., enquires as to the "formula for making candy out of honey—not bee-candy, but candy for the human candy-eaters." He evidently is not supplied with our Honey Almanac. Among its many recipes he will find this one—originated by Dr. C. C. Miller, who vouches for its producing something fine:

"HONEY CARAMELS.—One cup extracted honey of best flavor, 1 cup granulated sugar, 3 tablespoonfuls sweet cream or milk. Boil to "soft crack," or until it hardens when dropt into cold water, but not too brittle—just so it will form into a soft ball when taken in the fingers. Pour into a greast dish, stirring in a teaspoonful extract of vanilla just before taking off. Let it be ½ or ¾ inch deep in the dish; and as it cools cut in squares, and wrap each square in paraffine paper, such as grocers wrap butter in.

"To make chocolate caramels, add to the foregoing one tablespoonful of melted chocolate, just before taking off the stove, stirring it in well. For chocolate caramels it is not so important that the honey be of best quality."

* * * * *

THE LEAHY MFG. CO., as all know, are among our regular yearly advertisers. We notice in the July Progressive Bee-Keeper they have this to say about their present season's business, which shows evident satisfaction on their part:

"Business at this date is still good, and we are having about all we can take care of in ten hours a day. The last season has been the best in our experience, and our output was a third larger than ever before. From Dec. 15 until the last days of June, we ran overtime continually, part of the time 22 hours a day, and part 15 hours a day. We surely got all the trade we wanted, and then some more, and we took pretty good care of it, too, even if it did come nearly killing us all. Don't believe we ever want so large a trade again to fill in so short a space of time."

* * * * *

EDITOR W. Z. HUTCHINSON, of the Bee-Keepers' Review, dropt in to see us for about half an hour when in Chicago on his way home from a two-weeks' trip among Wisconsin bee-keepers and bee-supply manufacturers. We regretted that his stay was necessarily so short. He reports that there will not be a very large crop of honey in Wisconsin this year.

* * * * *

IT WORKT TOO WELL.—"They say that electricity is a sure antidote for the sting of bees," said the electrical enthusiast."

"Yes, I've tried it," said the student.

"Really? How did it work?"

"Well, a bee stung me, and it hurt so that I applied the electricity. After that I went over and sat down in a hornet's nest to see if I couldn't get over the effects of the cure."

The Premiums offered on page 508 are well worth working for. Look at them.

Root's Column

GLEANINGS AT REDUCED RATES....

We do not need to tell you about our journal, for it will speak for itself; but as an extra inducement we make the following low offers:

Offer No. A.

For 25 cents we will send GLEANINGS IN BEE-CULTURE from the time your subscription is received until January, 1900. If you send in your order promptly you will get 6 months for only 25 cents.

Offer No. B.

For $1.00 we will send an untested Italian Queen worth 75 cts. and GLEANINGS IN BEE-CULTURE one year.

Offer No. C.

For $1.00 we will send GLEANINGS IN BEE-CULTURE the rest of this year and all of next year, that is, from the time your subscription is received until January, 1901. The sooner you take advantage of this offer, the more numbers you will receive.

Offer No. D.

For 50 cents we will send GLEANINGS IN BEE-CULTURE 6 months beginning July 1 and Vol. I of Gleanings. This is for the year 1873. There are many interesting things. There are 12 articles on "Starting an Apiary," and while some of these may not be practical now, there is much valuable information and it gives a good idea of bee-keeping at that time. Our supply is limited and of course we cannot continue this offer long.

Old as well as new subscribers may take advantage of these offers, but all arrearages on back subscriptions must first be paid at $1.00 per year.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

Our Roll of Honor.

Some time ago Gleanings in Bee-Culture publisht what it was pleased to call its "Roll of Honor," being subscribers who had taken that paper ever since its beginning, or 25 years. We also made a call for those who had taken the American Bee Journal 25 or more years, and among those who responded are the following:

FRIEND YORK:—We have read your call for readers of American Bee Journal for over 25 years, and we respond at once. We have taken the American Bee Journal from the beginning, and my father began contributing to its pages in November, 1867, or over 31 years ago. We have also advertised in its pages for about 30 years.

Hancock Co., Ill. C. P. DADANT.

FRIEND YORK:—I have been a reader of the American Bee Journal for 30 years.

Lake Co., Ill. F. GRABBE.

EDITOR YORK:—I have taken every number of the old "American Bee Journal" from its first editor up to its present one. How many years it would make in all this time I cannot tell.

The Bee Journal is my old, old friend, and as long as the bee-hive can be seen in my yard the old Bee Journal can be seen in my house.

Our family came to this territory of Wisconsin in 1840. Our home was near the shore of that beauty of all lakes in the northwest, "Green Lake." We were 30 miles from a white man for a number of years. The Winnebago Indians told us the first swarm of bees was seen flying over to the west only a year or two before we came; then they knew the white man was coming close by.

My first bees came from the bee-tree; then came in use the log hive; then the old box, and next the drawer in the back of the new box-hive. I have lived thru all of these changes with my old friend, the honey-bee, to the present time. R. DART.

Fond du Lac Co., Wis.

EDITOR YORK:—In answer to your call for old subscribers to the Bee Journal, I will say that I have paid for and received all the numbers publisht since December, 1863, and had gotten quite a start on the road as a bee-keeper before I ever saw a bee-paper, as I had at that time over 100 colonies all in box-hives.

I began bee-keeping in 1852 with four colonies, and increast that number so that at the close of the season of 1857, I had 120 colonies, with two-thirds of them in a starving condition, on account of a hard frost on the morning of July 4 of that year. I did not know they could be fed, and all were lost that did not have enough honey to live on, but that was the last time that I let a colony starve, if I knew they needed help.

In 1859 I had gotten well started again, when foul brood made its appearance, and for two years it cost me quite a number of colonies, and had it not been for "Mysteries of Bee-Keeping Explained," by the noble and gifted Quinby, I have no doubt that I would have quit the business; but, as it happened, Quinby's book fell into my hands just in time to save all not too badly off, as he gave the cure for it that has never been improved on; and in all these years since I have had but one case, and for over 20 years I have not seen a case, and no foul brood is known in all this locality where thousands of colonies are kept.

For 46 years I have spent my time with the honey-bee, but now the rheumatism claims all my time, and in the spring of

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

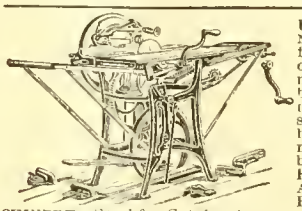
Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.



UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

Please mention Bee Journal when writing.

ADEL BEES Are not Italians; they are GOLDEN CARNIOLANS—and practically a non-swarming, non-stinging strain of bees; great honey-gatherers and sure to winter. Tested Queens, each, $1.00; 6 Queens, $5.50; 12 Queens, $9.00. Everything guaranteed. Book giving 37 years' experience in queen-rearing mailed free.

HENRY ALLEY,

24Atf WENHAM, ESSEX CO., MASS.

Please mention Bee Journal when writing.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

Italian Queens

Reared from the best 3-band honey-gatherers by Doolittle's method. Prices—45 cents each; ½ dozen, $2.50; one dozen, $4.50. SAFE ARRIVAL.

Address, **W. J. FOREHAND,**

28A6t FORT DEPOSIT, ALA.

Please mention Bee Journal when writing.

ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Warranted Queens, $1.00; Untested, 75 cents.

9A26t **J. D. GIVENS, LISBON, TEX.**

Please mention Bee Journal when writing.

Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT FAIL

Before placing your order, to send me a list of what you need in

Foundation, Sections,

And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

Please mention Bee Journal when writing.

No. 2110.—Price, $1.50, postpaid.

How to Secure a 14-karat Gold Diamond Point Fountain Pen at Wholesale Price.

No. 2110.—14 kt. Heavy Gold Pen, chased barrel.... ....$1.50 No. 4310.—Heavy Gold Pen, narrow, 18 kt. Gold Bands. $2.00

Box filler and directions with each pen. Every pen guaranteed for one year, by the manufacturers.

Readers of the American Bee Journal will be given a **discount of 20 percent** off above prices, as we have made special arrangements with the Diamond Point Pen Co., to give our patrons this absolutely perfect fountain pen at the wholesale price.

To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

We are offering our readers an absolutely perfect fountain pen which is guaranteed to give entire satisfaction, as the Diamond Point Pen Co., fully warrant and guarantee them absolutely as represented.

If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

Special Premium Pen Offers.

Offer No. 1. We will mail Fountain Pen No. 2110 free as a premium to any one sending us THREE NEW subscribers to the American Bee Journal for one year, with $3.00 to pay for same; or

Offer No. 2. We will mail Fountain Pen No. 4310 free as a premium to any one sending us FIVE NEW subscribers to the American Bee Journal for one year, with $5.00 to pay for same. Address,

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

No. 4310.—Price, $2.00, postpaid.

Honey Wanted.

We want to correspond with parties who have it to sell in large or small quantities. Address, giving source gathered from, style of package, quantity offered and price crated and delivered to your depot.

THOS. C. STANLEY & SON,
32Atf FAIRFIELD, WAYNE CO., ILL.

Please mention Bee Journal when writing.

NO STAMP REQUIRED

when you just **express** your **opinion** that repairs on Page Fences don't cost much. Ever notice it?
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.

Please mention Bee Journal when writing.

Greenwood Apiary For Sale Cheap.....

Good location; bee-cellar that holds 300 colonies; bee-house 18x30 feet, two-story. Best of bee-pasturage; bees all for extracted honey, and have produced in this location 85 barrels honey in one season. For particulars write to
32A2t HERBERT CLUTE, Greenwood, Wis.

Please mention Bee Journal when writing.

QUEENS! QUEENS! QUEENS!

Untested Italian, 60 cts. each; ½ dozen, $3.00. Satisfaction guaranteed.

LEININGER BROS.
28Etf Ft. Jennings, Ohio.

Please mention Bee Journal when writing.

1898 I sold them all to one man, and his first crop was about 8,000 pounds of nearly all comb honey.

I have always workt for comb honey, and my first honey-boxes held from 10 to 50 pounds—big boxes on big hives, and the small ones on the small hives, for then I made hives to match the size of the swarm to be hived. I learned early in my experience with bees that large, strong colonies were the ones that gave me the best returns for the care I gave them.

Dadant is only one of the thousands of bee-keepers that use large hives for the production of comb honey as well as extracted.

Now, Friend York, I will stop writing, for I have already said too much just to tell you how long I had taken the American Bee Journal. IRA BARBER.

St. Lawrence Co., N. Y.

EDITOR YORK:—I have been a regular subscriber to the "Old Reliable" since 1867, since which time I have received and read every number. In all, it makes over 30 years. I have been among bees since my earliest recollection, with the exception of two years, our folks having bees when I was young. When I was 14 years old, father gave me a swarm. The next year (1857) I had one swarm from the old one, and that fall we came away from York State, so I sold my two colonies of bees, which were in straw hives.

In March, 1860, I bought a colony in a box-hive, and have kept bees here since that time, or in all I have had bees 41 years. In 1867 I transferred all my bees into movable-comb hives, and have since used such

Better than Ever

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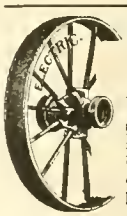

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wholly. I have tried numerous styles of hives on a small scale, and later, after a good trial, discarded all but the one I now use and prefer. Up to a few years ago I read all the books on bee-culture publisht in this country, and took as high as five different bee-papers for a number of years. I was enthusiastic, and blunders were common. I bought my first Italian queens in June, 1867.

Success to the American Bee Journal. Long may its banner wave!
Carroll Co., Ill. F. A. SNELL.

I have taken the American Bee Journal 25 years, including this year.
Wayne Co., N. Y. D. M. KETCHAM.

The wish was exprest by the editor, that those of subscribers who had taken the American Bee Journal for 25 years or more should send in their names. In accordance with that I will make the following statement:

In the year 1870 or 1871, I secured a copy of a bee-paper publisht in Ohio, I think, by a man by the name of King, and in the course of that year I learned of the existence of the American Bee Journal, sent for and obtained a copy, and liked it so well that I subscribed for it, and have taken it every year but one since, I think.
Wyoming Co., N. Y. DAVID HALL.

BRO. YORK:—In answer to your request, in regard to the number of years I have taken the American Bee Journal, I would say that I got my first hive in 1872, and subscribed for the American Bee Journal soon after, so that it must be 25 or 26 years, to the best of my knowledge and belief.
Lancaster Co., Pa. THOS. THURLOW.

FRIEND YORK:—I see you call for a roll of honor, for all who have taken the American Bee Journal for 25 years. I have done better than that; I have taken it ever since it was publisht by A. M. Spangler & Co., 25 North 6th St., Philadelphia, Jan. 1, 1861, and I have nearly every number now. There are a few numbers I have lost in the mail, and I have neglected to get them. I have been in the bee-business ever since. I had the first extractor in this county, and shipt the first extracted honey from this county. I was the second one to introduce Italian bees. I have over 600 colo-

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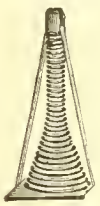

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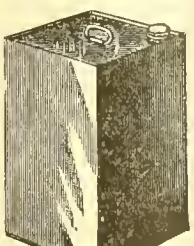

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nies to look after now, and I produced a big carload of honey in 1898. I taught my brother, W. L. Coggshall, how to keep bees, and was in partnership with him several years, under the name of Coggshall Bros. I built the first movable-frame hives in this section, and have lived to see bee-keeping advance from almost nothing to what it is now. D. H. COGGSHALL.
Tompkins Co., N. Y.

As you call for names of those who have been subscribers to the American Bee Journal for 25 years or more, I will say that I commenced in the bee-business in 1870, working for and learning from a bee-keeper. The following year I establisht myself with bees on shares. That year (1871), if I am not mistaken, I began taking the American Bee Journal, and have taken it ever since. I have all the numbers since the beginning of my subscription, but do not have time now to look up the exact date of commencement.
The Bee Journal has improved much since you took hold of it. I am not thru learning yet. WM. MUTH-RASMUSSEN.
Inyo Co., Calif.

I have been a subscriber to the American Bee Journal, without intermission, since 1870, and have all the numbers from then to the present time. JAS. POINDEXTER.
McLean Co., Ill.

I have taken the American Bee Journal since January, 1873, or about 27 years.
Albany Co., N. Y. W. S. WARD.

I have taken the American Bee Journal ever since January, 1873. I have all the volumes but one up to the present time.
Ontario, Canada. W. C. WELLS.

I have taken the American Bee Journal about 30 years. GEO. J. STRAY.
Branch Co., Mich.

I have been a regular reader of the American Bee Journal since 1871—over 25 years, and am not tired of it yet. I have been a bee-keeper over 60 years. I was born in 1828—71 years ago. I have learned a good deal about bees, but have not learned all yet. Some things I know, and a heap of things I don't know.
Hunt Co., Tex. W. R. GRAHAM.

I have taken the American Bee Journal ever since it was publisht in 1871, by Samuel Wagner, and have about all the back volumes since 1861, purchast from Thomas G. Newman. I cannot do without the "Old Reliable," and think it improves as the years go by. It arrives here on Friday, and I have never mist receiving a number in the 27 years that I have taken it.
Fayette Co., Pa. W. L. KEMP.

You are not perhaps aware that I am among the oldest subscribers to the American Bee Journal. I have been receiving it most regularly since July 1, 1868, and I can endorse the expression now often applied to it—"The Old Reliable." I have been reading it with great profit, as it past from one editor to another, from Samuel Wagner to the present day. We have it now, instead of its visits to our homes every month, coming every week, and instead of paying two dollars for it, as we did at its commencement, only pay the small sum of one dollar for it annually, tho it contains stores of excellent and interesting reading connected with everything belonging to bee-keeping, I hope its course will continue to advance in the future as in the past. I for one feel satisfied with the Journal; and wish its pushing and enthusiastic editor all success.
REV. JOHN ANDERSON.
Tiverton, Ont.

FRIEND YORK:—I notice what you say about subscribers who have taken the American Bee Journal for 25 years or more. I don't know whether I belong in the class or not, but if I don't I am not far behind. I commenced taking it at the beginning of 1870—just 29 years ago—when Samuel Wagner was editor. I took it steadily until just before you took hold of it, when for reasons you care nothing about, I dropt it, beginning again a few years ago. Now, I don't know what years it was I was out of the family, nor just how many years, but I think from 3 to 5. You see, no one knows for certain whether I am on your roll of 25-year veterans or not.
With the exception of Mr. Wagner, and the one who had charge for a short time after his death, I have enjoyed the personal acquaintance of all its editors, and have past a number of pleasant hours in its sanctums. It is not probable that I will ever again visit it in its own home, but it will probably be a regular visitor in mine as long as I live and am able to read it.
What an immense advance has been accomplisht in the methods and results in bee-keeping since the American Bee Journal first came into my home! and how much I owe it for my own success in the business is hard to estimate. Hoping the end of the next 25 years will find you still at the helm, and its present high character sustained, I am, Very truly yours,
Dade Co., Fla. O. O. POPPLETON.

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T. F. BINGHAM, Farwell, Michigan.

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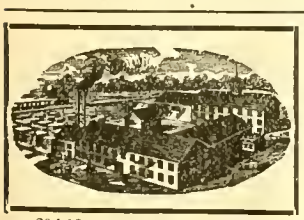

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, July 19.—A little comb honey is coming and the best white in pound sections brings 13 cents; some of it is not properly sealed and leaks from those few uncapt cells sufficiently to stain the cases and thus detract from its value. Amber grades, 10@11 cents, and dark, 7@8 cents. Extracted, white, 7@7½ cents. Amber, 6@7 cents. Beeswax, 26@27 cents, and sells on arrival. R. A. BURNETT & Co.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & Co.

NEW YORK, June 9.—Demand good for extracted honey, all kinds, and same finds ready sale at the following prices: Fancy, 7@7½c; choice, 6@6½c; fair, 5½@6c; common, 57@60c per gallon. Some demand for comb honey at from 11@12c for white, and 9@10c for amber. No more demand for dark. Beeswax dull at from 25@27c per pound, according to quality.

HILDRETH & SEGELKEN.

SAN FRANCISCO, July 12.—White comb, 10@10½c; amber, 7½@9c. Extracted, white, 7¼@7½c; light amber, 6½@7c. Beeswax, 26½@27c.

Only moderate quantities are arriving of either comb or extracted, with no prospect of the market being heavily burdened with offerings any time this season. Business is mostly of a jobbing character, and for such transactions the market is firm at the quotations. Some extracted of superior quality is arriving from Monterey County.

CLEVELAND, July 22.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.

A. B. WILLIAMS & Co.

BOSTON, May 17.—Fancy white, 12¼@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.

BLAKE, SCOTT & LEE.

BUFFALO, Aug. 4.—The honey season has opened in a moderate way, a few small lots of new arriving. Extra fancy 1-pound combs, 13@14c; fair to good, 11@12c; dark, poor, etc., 8@9c.

BATTERSON & Co.

OMAHA, July 18.—Altho first receipts of new crop Southern honey were recorded early in June, there has not been any regularity about them since. A straggling lot of comb turns up now and then, and, when quality is choice to fancy, is eagerly pickt up at 14@15c. A little lot of 1898 crop was received a few days ago and went at 13 cents, quality not above choice. For extracted there is not such an urgent demand, still, 7½@8c would be obtainable in a small way. The heavy buyers will hold back until later in the season, expecting to purchase on about the same basis of values as last year. Early shipments of all the comb that can be gotten out is certainly advisable; there will not be any chance of holding out with present quotations after the first demand is satisfied. PEYCKE BROS.

DETROIT, July 15. No old honey to quote, and no new offered. Prices are liable to rule higher as crop is short. The abundance of rain will no doubt help the crop of fall honey. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

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1 Untested Queen ..$1.00
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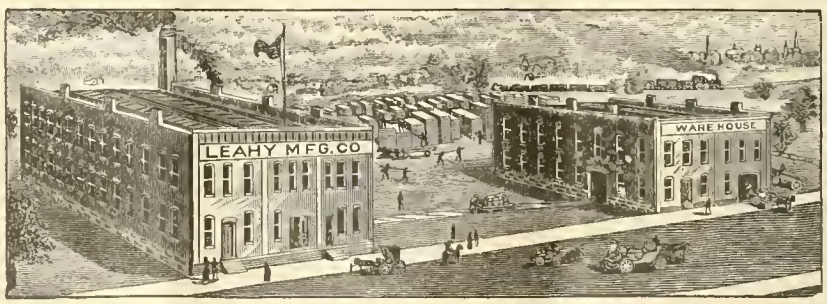

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A Bee-Veil

by mail, for 35 cents, with silk brussels front. If on receipt you are not satisfied with it, return it and we will refund your money.

Tested Italian Queens, 90 cents. Catalog of Apiarian Supplies free.

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AMERICAN BEE JOURNAL.

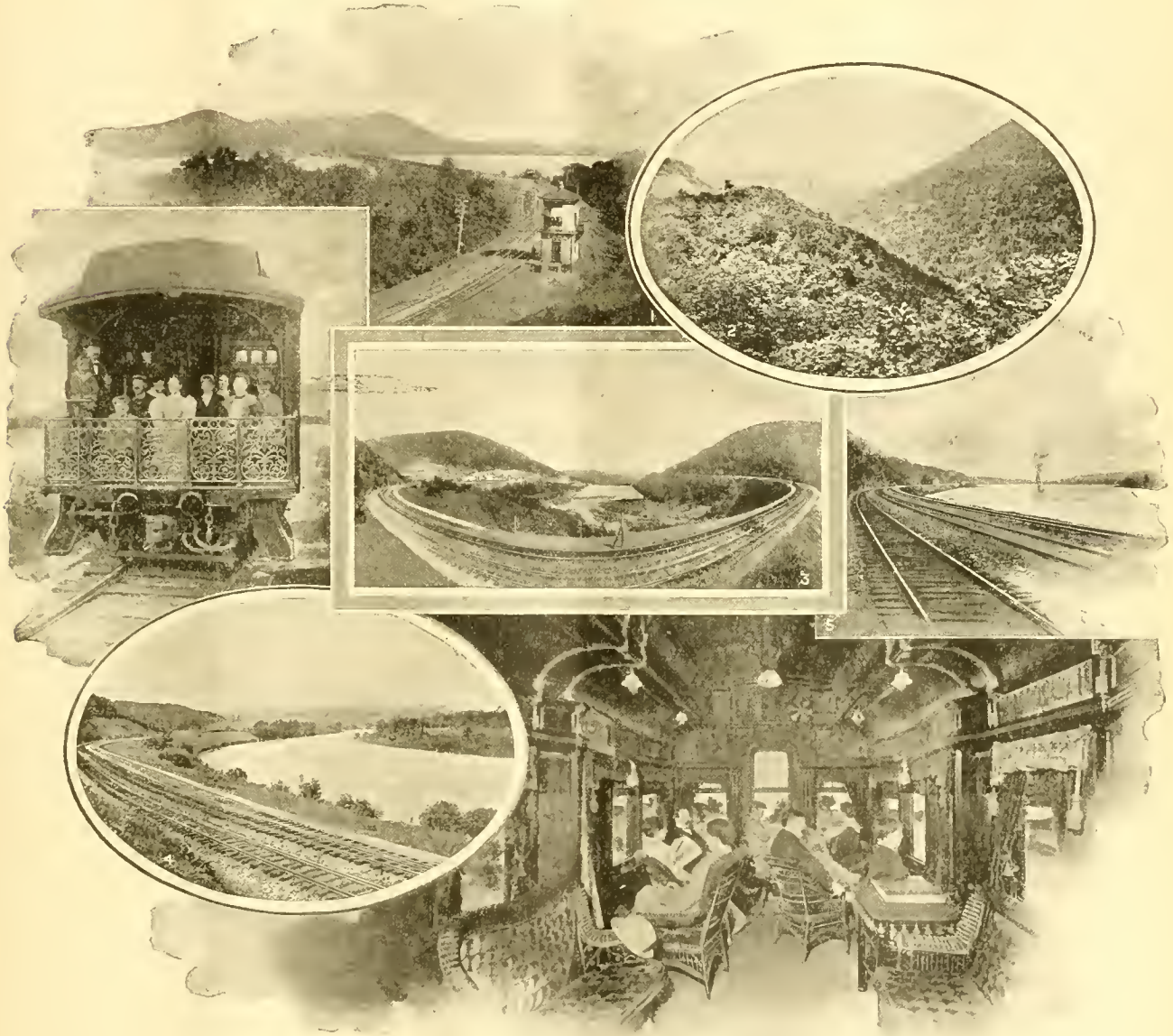
ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., AUGUST 17, 1899. No. 33.

Scenes Along the Pennsylvania Lines to Philadelphia.

[See Interesting Information on Page 521.



1. THE SUSQUEHANNA NEAR HARRISBURG. 2. IN THE ALLEGHENIES.
3. HORSE SHOE CURVE
4. THE BLUE JUNIATA. 5. OHIO RIVER NEAR PITTSBURGH.

FROM THE OBSERVATION CAR.

CONTRIBUTED ARTICLES

A Successful Way to Sell Extracted Honey.

BY E. B. TYRRELL.

I SEND my promist report of success with my new method of selling extracted honey. In selling honey by this method, I have it put up in Mason quart fruit-cans, bearing my name and address on a highly-colored label, also another label containing directions for reliquefying.

Taking a number of cans so prepared, together with a sufficient number of circulars (of which I send a sample), I am prepared for my canvass.

On reaching my field of action, I distribute the honey and circulars around to the private houses, leaving a can of honey and one of each of the circulars, and on the following day, or the day spoken of in the small circular, I again call and collect what honey is not sold, and the pay for the rest. So far the plan has workt well, and I have lost no cans of honey, and I am positive I have made many sales where otherwise I would not have done so.

The benefits of this plan are as follows: Agents being considered by the majority as a common nuisance, nearly every one has "no" on the end of the tongue when anything is offered for sale by an agent, and the quickest way to get rid of him is the only thought, while many times, on reflection, people find they wish they had purchast. But this plan gets them from an unexpected quarter, "surprises the enemy," so to speak, and very few will deny you the privilege of leaving the honey; and once in a family (especially where there are children) the temptation to sample is too great to overcome, and if you have a good article a sale is made.

Again, this system dispels many doubts about its purity, for they reason that you would not leave it if it were not the genuine article, and, in fact, you wouldn't.

In practicing this system a strictly high-grade article must be handled, and you are establishing a future trade in honey. Genesee Co., Mich.

[The two circulars which Mr. Tyrrell mentions in the foregoing, read as follows:—EDITOR.]

[Circular No. 1.]

TO THE LADY OF THE HOUSE.

Knowing that when household or other duties are pressing, you do not wish to listen to the clatter of an agent, and not having the time to fully explain what the accompanying circular does, I leave you what I have to sell, together with an explanatory circular, which you will please read, and I will call again to-morrow, when you can either return the honey, should you not wish to purchase, or else the price of the can, 35 cents. If you will not be at home on the above day, please leave the honey or cash at one of your neighbors, and oblige, Yours for trade,

E. B. TYRRELL.

[Circular No. 2.]

EXTRACTED HONEY.

Produced by - - E. B. TYRRELL.

TO THE PUBLIC.

Extracted honey is simply comb honey minus the comb. If you take a cake of comb honey, cut off the cappings or cover to the cells of honey, lay the cake in the bottom of a tin-pail, and then swing the pail around in a circle at arm's length, the honey on the side of the cake next to the bottom of the pail will be thrown out by centrifugal motion. Now turn the cake over, repeat the whirling process, and you have the comb emptied of its honey, and yet not destroyed. This liquid honey left in the pail is extracted honey. In the production of extracted honey by the bee-keepers, large combs are used, and the whirling is done by a machine or extractor, and the emptied combs are replaced in the hive for the bees to again fill with honey, when they are again extracted. As more honey can be gotten by this process, as the bees are saved the expense of building comb you can readily see why it can be sold cheaper than comb honey, and yet be just as good and pure in every respect.

Extracted honey will granulate or become white and hard in cold weather, and while at first this may seem to be a detriment, it is not, for it can be reduced to its liquid form again by simply heating it. Place the can or dish containing the honey you wish liquefied in warm water, when in a short time the honey will all melt, and will not granulate again for a long time, BUT BE SURE AND DO NOT LET THE WATER GET TOO HOT, not hotter than you can bear your hand in, as overheating the honey spoils the flavor and darkens it. I try to have all my honey in the liquid form when sold, but it may granulate in time after it is sold, and this is good, in fact the best, proof of its purity. Some prefer it in its candied or granulated form. Honey should be kept in a warm, dry place, dry especially, as freezing won't hurt it, but dampness will often cause it to sour.

In conclusion, I wish to say if there is anything you do not understand do not be afraid to ask questions, as I am building up a trade for my honey, and am willing, in fact wish, to answer all the questions you will ask me.

If you do not find my honey satisfactory, you need only drop me a card and I will call and take back the honey and refund your money. Is not that fair enough? My prices are as follows:

One quart, or 3 pounds in a quart Mason fruit-jar.	$ 35
Ten pounds or under, per pound	10
Thirty pounds	2 75
Sixty pounds, or 5 gallons	5 00

By buying 60 pounds you get it as cheap as maple syrup, or only $1.00 per gallon. All honey sold by me (unless sold personally, direct to the consumer) bears my label containing my name and address. Remember, if you want honey at any time, simply drop me a card, and it will be promptly delivered at the above prices.

Yours respectfully, E. B. TYRRELL.

Care of Honey—It Needs Some Attention.

BY W. Z. HUTCHINSON.

AFTER honey has been thoroly ripened in the hive and is then removed, its future palatableness depends entirely upon the care that it receives. Too many look at honey as a simple sweet, like cane-sugar, forgetting that its flavor, its aroma, its "bouquet," so to speak, are its chief attraction, not knowing that exposure to the atmosphere will leave it a flat, stale sweet. The makers of maple syrup are careful to gather and boil the sap as quickly as possible, and then immediately seal the syrup. All this is done to prevent the loss of flavor by exposure to the air.

It is the same with honey. When first taken from the hives it has very distinctly the flavor of the flowers from which it was gathered. Each variety of blossom gives a distinctive flavor. By tasting of honey, an expert can very readily tell from what class of blossoms it was gathered. Sometimes the flavors are really too pronounced, too strong, when the honey is first gathered. Basswood honey is an example. In such cases a little exposure to the air may be an advantage. Thoroly ripened extracted honey should be at once put into bottles, cans or barrels and sealed up tight, and then put in a cool place. It will of course soon candy, or crystallize, but the flavor will be retained indefinitely, and the honey can be liquefied whenever it is needed for use. Care must be exercised in melting the honey, that the flavor is not injured by the application of too great heat. Of course the honey will not be burned if it is not heated hotter than boiling water, but the application of so great a heat as this rapidly drives off the flavor. Keeping the package closed and applying a very gentle heat—never above 150 degrees—is the better way. Putting up the honey in such packages as can easily be put into warm water, makes the liquefying more convenient.

Comb honey is of course already sealed, but not hermetically, unless it has remained on the hive a long time. Honey has a great affinity for moisture, and if comb honey is stored in a damp atmosphere, it will absorb the moisture thru the slightly porous cappings, and become thin and watery. The bulk of the honey will be so increast that it will burst the cells and ooze out. The honey may become so thinned that fermentation will set in. Cold is also detrimental to comb honey, causing it to candy in the cells. When comb honey is first taken from the hives, it should be stored in a hot, dry atmosphere. A room in the southwest corner of a building, where it will become very hot in the afternoon, is a good place to store comb honey. I know of one bee-keeper who has a small house of sheet-iron in

which to store his comb honey when taken from the hives. The heat continues the ripening process, and if there are any unsealed cells of honey, the honey in them becomes thicker and riper instead of thinner.

Down cellar is where the ordinary purchaser of comb honey is almost sure to put it. No place could be more undesirable. Dryness and warmth are the requisites for keeping comb honey. As ordinarily kept, comb honey will candy before spring; but by keeping it in a warm atmosphere it will not candy, and will really improve with time. I have now in my possession some comb honey that was on exhibition at the World's Fair, and it is still a first-class article. It has been kept in a cupboard abjoining the sitting-room. I also know of a bee-keeper who one year kept over a large crop of comb honey, because the price was so low. His honey-reom was over a cellar, and the walls were double, with the spaces filled with sawdust. There was a stove in the room, and a little fire kept each day, the amount depending upon the weather. The honey came thru in good condition, and was sold the next spring at a considerable advance in price.

Several times in this article the "ripening" of the honey has been mentioned. I will explain that when nectar is gathered it is thin and watery. The heat of the hive, aided by the manipulations of the bees, gradually reduces the nectar to thick, "ripe" honey when it is sealed over. Some bee-keepers make the mistake of extracting honey before it is thoroly ripened. Such honey never has a fine flavor, and is likely to ferment.—Country Gentleman.

A Canadian View of Large and Small Hives.

BY C. MITCHELL.

I HAVE used both large and small hives side by side nearly 20 years, my largest being the D. A. Jones hive, which is 15 inches deep inside, and holds 12 frames running crosswise. It is the same size on top as the 8-frame Heddon hive. My other hive is the Heddon 8-frame Langstroth hive. For many years I have workt and twisted when reading the hot discussions on this subject, and wondered why every one seemed to have mist the most important point of all in the large hive, viz: that the large hive will winter more bees. In all those years Mr. Dadant is the only one I have noticed to even hint such a thing (until now).

The first season a swarm is put into a large hive it does not seem very profitable, unless there is a good fall flow, as it takes more honey to fill up the hive. But just as sure as death and taxes, they will carry over more bees, and consequently store more honey. I have often, when unpacking the first day of May, had to carry a knife and plate and take off two pounds of new honey under the cloth on top of the frames, while many of my 8-framers would not be full. How often has Mr. Doolittle said if he could only have plenty of field-bees at fruit-bloom that he thought he could get a good yield from it.

Now, where is the loss in a large hive? Perhaps it weighs 75 pounds with a class of honey which I hardly ever offer for sale—it is always willow and dandelion, and sometimes maple syrup. Red-squirrels have a way of tapping the twigs and letting the sap evaporate to a fine syrup, and the bees in good spells of weather find employment.

Then, often, we have a gap in the honey-flow for two weeks, just when there is the most brood—before clover—when my 8-framers suffer much the worst. Now, what did this honey cost me? Not one cent more than the Heddon 8-frame, which hadn't any, and which is often empty by clover bloom, and which has to be filled up with white clover—just the very reverse of what is said on page 202.

No, no, Mr. Hutchinson, the above is not unwarranted with me. Of course, getting those occasional spring flows *before we dare unpack*, makes a difference, but I am tired of seeing so much of this begging locality for everything; also how much brood we can get from an 8-frame hive. I want at least one comb at each side without brood, which should contain fresh pollen and unsealed stores at all times up to the main flow.

I am satisfied I have lost hundreds of dollars by using 8-frame hives, in 15 years. I will hereafter have almost all of my bees in 10-frame hives, which will be my last change.

I even find no trouble in getting section honey from those large hives, but when they cast a swarm I prefer to put them into an 8-frame hive. Ontario, Canada.

Adaptability of Bee-Keeping to the Ministry.

BY HON. GEO. E. HILTON.

I HAVE often wondered why ministers did not engage in some light work, such as the raising of small fruits and vegetables, bee-keeping, or some of the health-giving, mind-resting, yet fascinating pursuits, thereby helping themselves to a little money aside from that received from their parishioners, leaving many times a better impression upon the community in which they live, and at the same time giving themselves that much needed mental rest. Every minister is familiar with Virgil and his beautiful poems, in which he wrote of the bee. Before the world had a Savior—yes, before the Christian era, bee-keeping was lookt upon as one of the important industries of the Old World.

Our dear old Father Langstroth (now gone to his final reward), after losing his health in the ministry, resorted to bee-keeping with a hope of receiving a new lease of life. Bee-keeping at that time was in its infancy, and carried on in a very primitive manner. But his inventive mind and deep interest in the improvement of the old box-hive, gave us the movable-frame hive that bears his name. For this alone the bee-keepers of the world owe him a debt of gratitude they can never pay. He was the "Huber of America," and his name will be a household word wherever bee-keeping is known. As the result of his efforts, many ministers (whose names I can give) have engaged in bee-keeping in connection with their ministerial work, and I have often wondered what could be better adapted to those that have allowed their minds to delve into any special line of thought. All know how restful it is to have something that will divert the mind occasionally; no matter if the study is just as deep, the change is restful.

Another thing, I think the early and latter part of the day the better adapted to study and thought. As for myself, my best efforts in writing have occurred between three o'clock in the morning and daylight, when not another soul about the place was astir, and I think this is true with many. Now, the only time that bees need attention is during pleasant weather, and then only from eight o'clock in the morning until four in the afternoon. If a minister must be in his study during these hours, he can usually arrange his hives facing his study window, so that every time he raises his eyes for a moment's rest, they will rest upon the fronts of his hives. And what could be more restful than to watch for a few moments those "tireless little workers" and "emblems of industry"?

Many will ask, What will I do with them Sundays? Or won't they, the first time I have a funeral to attend or a marriage ceremony to perform, think it about time to increase and swarm and go to the woods? In reply I will say, scientific apiculture has overcome these obstacles, and by placing any of the queen-excluding devices over the entrance, the swarm is safe. This will not prevent their swarming, but as the queen cannot escape, as soon as the swarm miss her, they will return to the parent colony, and, as a rule, will make another effort the next day. But I usually save them this trouble by going to the hive and removing all the combs with adhering bees, except the comb I find the queen upon, to a new hive, and fill up this hive with empty combs or frames, well wired and filled with full sheets of foundation. All the old or field-bees will return to the parent hive the first time they leave the new hive, but the nurse-bees, or those less than ten days old, will remain in the new hive and care for the brood and rear a young queen, and both colonies will build up rapidly. As the swarming season lasts only about two months, this is not much trouble. Or, you can manage your bees for extracted honey, and you will not average one swarm from ten colonies.

There are many other points I could enumerate, but to those who are apiculturally inclined, I have said enough. So far as I know, it has proven fascinating, healthful and profitable.—Michigan Farmer.

Density of Nectar in the Flower-Cups.

BY A. B. BATES.

MR. NORTON, on page 403, in unraveling the idea of different densities of nectar in the flower-cups, says that nectar when first secreted is of a uniform consistency. Doubtless true, and when God made man he pronounced him not only good, but very good, but how was he afterwards? Is there not a possibility of nectar changing

from that state of evenness it was secreted by the flower-cup that would bring about the facts as I have exprest them in my former communications?

It is an admitted fact that honey in ripening thickens: this admitted, it follows logically that the honey of the same cell and at the same time, during its process of ripening, is of different densities, and if such characterizes honey in the cell, why is not nectar in the flower-cup subjected to the same changes, admissive of the same characteristics under like circumstances?

According to the theory that warm air contains more moisture than cold air, honey kept in a warm, airy department gives off moisture; the cool air entering a warm room, or better, a warm hive, where honey is stored, takes up moisture; coming in contact with warm honey it expands, and takes on moisture. On the other hand, if it is stored in a cold, damp cellar, the warm air from without, striking the cold honey within, contracts and gives off moisture. And since honey must become tangible to the air before its moisture can be absorbed by it; and since the atmosphere cannot penetrate the wax of the cell to be tangible to all parts at the same time, it follows that the watery or thinner part of the honey must be drawn to the mouth of the cell, constituting not only a difference in the density of the honey of the cell, but leaving the richer of the saccharine substance at the rear. So attraction as well as gravitation testifies in behalf of my statement.

And what is true of unripe honey is also true of nectar, since it is rawer, more easily affected, and admissive of changes.

The earth's surface at night retains the heat received from the sun longer than the atmosphere above it; the cold air coming in contact with the warm objects—flowers as well as other things—contracts, giving off moisture, pouring it into the flower-cup on top of the nectar, and it will have to be proven that water is heavier than nectar, or else we have nectar in that cup not of a uniform thickness and sweetness.

Suppose the short-tongue bee can barely reach to the nectar in the cup without any margin to go on; when the moisture of the atmosphere is poured in on this nectar till the cup is filled to the reach of the short-tongue bee, and surplus is stored, what is it? Sweetened water. Is there nothing better remaining in the flowers from which this was stored for a longer-tongue strain?

I have observed distinctly on many occasions my Italian bees working early in the morning on red clover. If they are not extracting the sweetened moisture resting on its nectar, why not work on it as freely at other hours of the day?

I cannot exactly understand Mr. Norton's meaning of the word "far-fetcht," and in conclusion will say his lime was too much saturated; if he places together the proper measure of parts, he will form a body we call "mortar," that compares to fully ripened honey, equal in density and sweetness. Franklin Co., Mo.

The Bee-Business and Prospects in Utah.

MR. J. S. SCOTT, of Utah Co., Utah, wrote us, July 23, in reference to the present condition of the bee and honey business in Utah:

EDITOR YORK:—

My object in sending you the enclosed letters is that the facts may be known regarding the condition of the bee-business and prospects for a honey crop in Utah. The letters are from prominent bee-keepers in four of the principal honey counties in the State, and can be relied upon as to the true condition.

The loss in bees here is about 50 percent. Those left are doing but little. Utah will not have half a crop of honey.

I sent out the questions found in the enclosed letters, and received the answers, which explain the situation correctly. A certain Salt Lake City bee-keeper wrote a letter to a bee-paper in which he stated that the loss of bees was about 10 percent. Such reports are injurious. Had he taken pains to ascertain the truth, he certainly would not have made such a mistake. J. S. SCOTT.

The questions which Mr. Scott sent out read as follows:

1. What is the prospect for a honey crop in your vicinity this season?
2. What is the percent of loss in bees?
3. Did greater mortality occur during winter or spring?
4. Do your bee-keepers produce more extracted than comb honey?
5. What, in your opinion, is the prospect for a honey crop thruout the country?

The responses received are given here, using as a signature the county from which the replies came rather than the name of the bee-keeper, as requested by Mr. Scott:

1. Rather poor outlook. Half to two-thirds crop.
2. About 50 percent loss, from trustworthy reports.
3. Winter killed and weakend so many that it was more severe than spring. Geater mortality in winter.
4. Salt Lake County produces more extracted honey.
5. Much less than an average; about two-thirds, for an estimate. SALT LAKE.

---

1. The prospects are very poor.
2. I should judge about 40 percent from all causes—winter loss, spring dwindling and foul brood.
3. During spring.
4. Mostly extracted.
5. The prospects for a honey crop are very poor.

The bee-inspector reports a great deal of foul brood, some apiaries with every colony diseased. The trouble has been, dying in winter and letting them get robbed out. UTAH.

---

1. Good where the bees are in good condition. Crop will not be large.
2. From 10 to 100 percent. Mine is about 80 percent. A good many that are left will only build up for winter.
3. Spring.
4. No. All comb honey.
5. I think the honey crop will be small, for lack of bees to gather it. I have 48 colonies left, from 170 taken out of the house in what I thought was fair condition. It is too early to be sure, yet where the bees are strong I think they will do well. I have 35 colonies that will be all right. I have not had any swarms yet. What is the matter that so many bees have died the past winter and spring? Mine did not die; they left. I think it was because they could not get any pollen. I do not think it was cold weather alone that killed the bees, but the frost killed the flowers here and the bees left. WASATCH.

---

1. Fair, tho rather early to speak.
2. About 33⅓ percent.
3. Spring.
4. Extracted.
5. I am not posted on conditions about the county.

As there was nothing to indicate from what county the last replies came, we were compelled to leave them unsigned.

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

A MICE-KILLING BUG.

"Bugs, such as mice," eh? Page 405. Well, it's fair strategy to make one kind of bug kill another kind; and they claim to have a bug now that will kill mice.

QUEEN-CELLS BUILT BY RECENT SWARM.

Thanks to Dr. Miller for his suggestion that queen-cells built by a recent swarm are not rare but common. Guess he's right. Page 406.

WELCOME TO HAND-SHAKING GLOVES.

Yes, Dr. Peiro, I'll be good now; so kind a reply to an irreverent, if not irrelevant, racket compels it. Hurrah for the hand-shaking gloves! A fellow must be *kind-o'* good when he hurrahs for them, must he not? Page 478.

NEW-OLD BEE-LITERATURE—LARGE VS. SMALL HIVES.

Mrs. Woodmansee very wisely thinks that many things which we read carelessly the first time are new when we

read them again. It is also true that many things a beginner cannot digest will be interesting and nourishing a year or two later on. Keep your bee-magazines and see how meaty they will seem on second reading. She made a good spring observation as she watcht that apiary being overhauled. Eight-framers and sectional hives all very weak; ten-framers much better; tens and twelves with big and extra-deep frames mostly rousers. Something may have to be done about this if it is *always* so. Will take some time to deeide whether it is or not. Page 418.

ALWAYS WRITING WHAT ONE MEANS.

Dr. Miller gets at the root of an important and vexatious matter where he says writers sometimes say something quite different from what they mean. Page 418. As a sort of corollary of this suffer me to say that few (I suspect) get to be writers of the very highest rank till they contract a sort of frantic dislike for sentences and clauses that *can be* understood in more than one way. Even if laziness does say, "Let it go; no one will ever misunderstand *that*," out it has to come.

FINE LOT OF BEE-STING REMEDIES.

What a fine lot of sting remedies C. P. Dadant enumerates on page 419! Some got away, too. I think we may profitably talk a little more about *rubbing* as a sting remedy. Altho pretty sure to make ordinary patients worse, it is handy, and really excellent, for bee-keepers who have become two-thirds inured to bee-poison. Remove the sting instantly, and rub the spot until it burns (with frictional heat) so you can hardly bear any more; then go on with what you're at, and avoid thinking of or looking at the sting at all, and the poison will be so diluted and spread around as to fail to set up its characteristic action. Pretty much the same may be said of opening the smoker door and toasting the spot. That we lose part of our inurement every winter, and gradually recover it when we begin handling bees in spring, is a rather unfamiliar idea to my noddle, but quite likely it is right.

AMMONIA AND CLOSING THE PORES FOR BEE-STINGS.

Mr. Dadant ventures on the record that the very best remedy of all is ammonia—external for moderate cases, and internal also for worse ones. I will venture that the very best remedy is closing the pores of the skin in the vicinity of the puncture. Sting analogous to a fire, and this remedy is like shutting the doors and windows. *How* to best close the pores decidedly depends. If the sting is on clear, level territory (mostly it isn't) the best way is to put on three or four inches square of tissue paper with strong mucilage. If it's near the holes and hummocks of the countenance, smear a similar extent of space with the thickest honey you can get, or with any harmless and viscid substance. Get rid of the idea that the daub effects any chemical or medical change, and understand it as merely keeping away part of the natural supply of oxygen. Page 419.

BEE-STING INFORMATION—"IMPORTANT IF TRUE."

Never saw so much bee-sting information in one place before as in the bee-boil from J. Langer, on page 437. Important if reliable. We can all test this scientist's work at one point, where he says the poison has a *pleasant* aromatic odor. To be sure, the smell that one person likes another don't like, but some of us would say *unpleasant*. A mere trifle heavier than water. From 166 to 333 bees carry a grain of poison. (Looks exaggerated. A grain would be quite a lot.) The poison proper is not the acid itself, but dissolved in the acid—and precipitated by alkali. Then what earthly use to give ammonia, or other alkali, as a remedy? The dried poison is as poison as ever; but left in its natural fluid state, and in a glass tube not sealed, it becomes harmless in about four weeks. Sealed it keeps longer. Here's richness and wisdom, lots of it—if somebody else doesn't come and upset it all. Simmer the above and Dadant's article well together—the resulting elixir well shaken before being taken.

NEW EDITION OF DR. WATTS' "HIMS."

So according to Dr. Watts (page 419) Apis dorsata build but one size of cell, and their drones are all reared in worker-comb. Small edition of Dr. Watts' *hims*!

OPEN-AIR HONEY LIABLE TO FERMENT.

The idea that all varieties of bees which build in the open air trust to aerial evaporation to keep their honey, and do little to it themselves, is striking, and impresses one as likely to turn out correct. That nearly all of 60 or 70 honey samples at Calcutta fermented more or less, looks like pretty good evidence.

DOOLITTLE'S EXPERIENCES.

The Doolittle article, page 420, may be summed up in this: Don't give a laying queen to a colony that has just swarmed, unless your rather exceptional location yields a continuous flow. Tater (without feeling sure) would incline to say: Don't do it at all—makes the swarming worse, which is likely to be terribly bad without. Mr. D.'s experience hardly covers that kind of a location, I think. Thanks for the able way which he has workt up what he has experienced. Hope he will tolerate my good, hearty dissent to his doctrine, that bees reared during basswood are mostly dead before fall-flower harvest. Say *might be*, so far as time goes, but as midsummer is apt to be largely idle time, more frequently in first-rate working order.

BEES WORKING ON PEAS—COWPEAS?

And W. T. Lewis, on page 431, we'll nail him to the record as one who has seen bees work with enthusiasm on peas. May be he means cowpeas, however, which would be less remarkable.

DRONE-COMB IN THE SECTIONS.

Three respondents, on page 427, intimate that drone-comb in sections is no harm. Tater thinks the harm of it has been greatly exaggerated.

WHITE VS. BLACK POULTRY.

And Tater wants to put one of his bugs in the ear of that poultry-man, page 425, who took to light-colored fowls because his bees worried the dark ones. Doesn't he know that standard works on poultry favor that change for an important and entirely different reason? Fowls have to be killed and sold, even if eggs are the main object, and white ones look and sell better when drest.

PERHAPS A MIX-UP OF FIGURES AS WELL AS SWARMS.

It's a nice one—that record on page 422, of 548 swarms from 48 colonies in one year—else a mix-up of figures, or something. That is over 11 swarms to one count in spring. As Mr. Dadant (Gleanings in Bee-Culture 460) speaks of it as *seven* per colony, probably there has been some slip.

THAT CURIOUS RESULT FROM SCRAPING HIVES.

Just to be contrary, I'll guess that that doubted experience on page 441 was genuine. Bees had been gathering, as substitute for propolis, some sticky and very poisonous paint.

ILLINOIS' PURE FOOD COMMISSIONER.

Gov. Tanner's reasons for not appointing a dairyman or bee-man as food commissioner *sound* all right. Must be thankful that a glucose man or oleo man was not wormed in somehow. Page 440.

IS SWEET CLOVER HONEY DARK?

Rather a novel idea to us that sweet clover is a dark honey—still not necessarily an error on the part of that Kansas official, on page 440. Liable to be blackened by mixture with road-dust, one would say. And most of us do not see sweet clover honey unmixt with something else.

BAIT FOR HUNTING BEES IN TREES DURING A HONEY-FLOW.

I fear Mr. L. J. Clark, page 446, will not find the bait that bees will work on zealously while the nectar harvest is good—

Quoth the sagacious little bee,
"The best is good enough for me"—

and therefore the tempters will tempt in vain. But there are often periods of a week or more in summer when the flowers don't "give down." Watch an apiary till you capture one of these famine spells (when domestic bees are inquisitive, and eager for anything that turns up), then go for the woods with the usual device of burning comb and exposing honey. I can see no reason why some success might not be had in any season when bees will rob.

PUTTING SMOKER-FUEL ON TOP OF THE FIRE.

Mr. C. P. Dadant uses poor smoker-fuel, I plainly see—with first-class fuel it is a very bad plan to put it on top of the fire—burns up too quick. All the same, his talk to beginners (page 434) is an excellent one. COGITATOR.

The Premium offered on page 525 is well worth working for. Look at it.

QUESTIONS AND ANSWERS.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Hardly Foul Brood.

I opened the hive of one of my best colonies yesterday, and found about a dozen dead larvæ about ready to cap over, some were white, some of natural color, others were all settled back in the cell. Part were a little ropy, without any smell to any of them. I opened other hives, and found now and then a dead larva, probably four or five on some frames. On the frame that had the most dead, a worm that lookt like a wire-worm crawled out of the comb. It wasn't a moth-worm, for it was very slim. I thought it might have something to do with the case. MINNESOTA.

ANSWER.—Your bees hardly have foul brood, but it will do no harm to watch the matter closely. I don't know what that worm may be, and don't know whether it has anything to do with the trouble.

Queen-Rearing Questions.

1. Do you think that it will pay me to rear queens next year?

2. Please give the best method you know for queen-rearing, and explain it.

3. How many queens do you suppose I would sell in one season?

4. How many nuclei should I have?

5. What mailing-cage is the best? SOUTH CAROLINA.

ANSWERS. 1. Doubtful that it will pay you to rear more than enough for your own use, unless you have had a great deal of experience.

2. Get Doolittle's book on queen-rearing and study it up in full.

3. Probably very few the first season. A great many are selling queens, many of them well known for years, and you would stand rather a poor chance as a stranger.

4. That would depend altogether on the amount of your business. If you expect to sell 10 a month, you would perhaps need that number of nuclei.

5. Perhaps the Benton cage.

A Number of Queens and Queen-Cells in a Colony.

I had an experience the other day that far surpasses anything I ever saw, or anything I ever read, tho I will confess that my experience with bees has been very limited. In June I discovered a colony of bees in a tree, out in the woods. Not long ago I cut the tree, and brought home that part of the trunk that contained the bees. July 21 this colony swarmed; after hiving them, I made an attempt to find out what caused them to swarm. Upon investigation I discovered a piece of comb in the trunk of the tree (after splitting it open), about one foot square, that contained 23 queen-cells; and upon further investigation I discovered 10 queens, all alive, that were left in the tree, and I do not know how many queens are with the colony now. This incident seems to me to be a very remarkable one. It seems to abolish, and upset, the theory of but one queen to a colony.

As I have said, my experience has been very limited, and this incident may be a usual occurrence. This colony had just located in the tree last spring. ILLINOIS.

ANSWER.—The rule that only one queen is suffered in a hive is subject to exceptions. It is not so very unusual to find two queens laying in the hive at the same time, a mother and a daughter, the mother being about played out. There are also rare cases in which two queens not related will be laying in a hive at the same time. But to find a number of *virgin* queens in a hive at certain times is the rule rather than the exception. A number of queen-cells are started when bees contemplate swarming, and about the time the first one is capt over the prime swarm issues. Something like eight days later the first young queen emerges from her cell, and if the bees have it in their plans to swarm further, no other queen is allowed to issue from her cell till the issue of a second swarm. It often happens that when all idea of swarming is given up, all the queens that are mature enough are allowed to emerge from their cells, as in the case you saw. But there will not long be more than one of them in the hive, for they will fight till only one is left.

A Colony Continually Swarming.

We bought a colony of bees June 4, and about three weeks ago they swarmed. We caught the queen in the trap, and that night I gave them two full frames of brood and two frames already drawn, and filled the rest of the hive with frames and foundation, and ever since they have been swarming once and twice a day. We were very particular in scraping the hive and scalding it out with salt water, so we put them in another hive and gave them a new bottom-board, and still they are the same. They are carrying a little pollen in, but we cannot see they are doing much more. The swarm we got June 4 swarmed again July 23, and they are working very hard. ONTARIO.

ANSWER.—It is quite possible that the two frames of brood are more than they desire, making it seem too much as if they were still in their old hive. If you leave them with no brood or honey they may change their minds.

Feeding for Winter Stores.

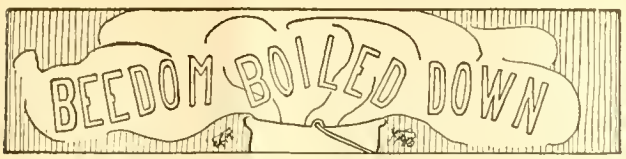
This year is a very poor one for bee-keepers in this section of Iowa. Spring opened three weeks later than the average of the past 10 years, but then the continuous warm weather soon made up for the time lost, the trees blooming as early, if not earlier than usual, and colonies that had suffered from the long-continued cold winter did not have time to build up to take full advantage of it. After fruit-bloom the bees were in very good condition, and by the time the wild cherries bloomed many were so populous that extra extracting-supers had to be put on to prevent crowding the brood-nest by the honey coming in. This caused the bees to swarm as early as May 23, and possibly sooner in other places. The honey-flow, however, was cut short by heavy rains and storms. Raspberry yielded some; basswood failed; white clover was winter-killed, yet an abundance of it has grown up, which is promising for next year. Basswood and white clover are what we mostly depend upon for surplus, and golden-rod frequently yields a fair crop in the fall.

Until now, the bees could use up all they could gather, and, unless the fall flowers yield sufficient, we shall not have any surplus this year, and may be compelled to feed our bees for winter. I would like to ask for advice, in that case.

Would you advise feeding sugar syrup, or the cakes recommended by Mr. Abbott? How would you make these cakes, and of what size? IOWA COUNTY.

ANSWER. The candy cakes are for winter use, and the syrup is the thing for you to feed while the bees are flying. It is true, Mr. Abbott thinks highly of a cake of candy over the frames as a matter of security, but I think he would not want the whole of the winter stores in that shape. Neither would I feed syrup, strictly speaking, but sugar and water, without any cooking. Feed equal parts of sugar and water, either by measure or by weight. The water may be hot or cold. Feed in any way that allows the water to drain down thru the sugar. The Miller feeder is good for this sort of feeding, and so is the crock-and-plate plan. But the feeding must be done early enough so that the bees can properly ripen it. Better get thru with it as early in September as you can, or even in August.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.



Amount of Wax from Brood-Combs.—Editor Holtermann says in the Canadian Bee Journal: "F. A. Gemmill says in the Bee-Keepers' Review that the amount of wax he has been able to secure from a set of 8 Langstroth combs is 3 pounds. I will guarantee I can take 8 Langstroth combs and get 4 pounds of wax from them."

Surplus Honey in Frames.—Mention is made in the British Bee Journal of a plan of producing comb honey that was introduced by R. A. H. Grimshaw. Shallow frames of foundation are taken to the moors, the frames being wired. When it is desired to make use of the long slab of honey on the table, the wire is clipt from its fastening and drawn out endwise.

Keeping Comb Honey.—G. W. Demaree says in Barnum's Midland Farmer that he has a few sample boxes of comb honey two years old with cappings as white and pure as when taken from the bees, and such honey can be kept in this condition for an indefinite time if kept in a warm, dry room. If chunk-honey must be packt in crocks, set the combs on edge, and when filled within a few inches of the top, cover with extracted honey.

Solar Wax-Extracting.—W. R. N., in the British Bee Journal, says he has found it advantageous, instead of placing in his solar wax-extractor the material to be melted directly upon the perforated bottom of the tray, to put first on this some very thin and cheap cloth, and then when it comes time to clean out, this cloth can very easily be peeled out while the heat is present. He thinks well of going still farther and having only the cloth, then it can be thrown away as often as it becomes clogged.

Apis Dorsata.—Here's what Editor Holtermann, of the Canadian Bee Journal, thinks about it: "I cannot imagine that we want a bee which can rear drones and workers in the same cells. We can control drones in Apis mellifera with comb foundation, surely no intelligent and well posted bee-keeper would go back to the system where he cannot control drones by using worker-comb foundation. It is well to investigate, but the more I hear of the bees the less favorably I am impresst with their economic value."

The Source of Honey-Dew is discust in an interesting manner by R. McKnight in the Bee-Keepers' Review. He greatly disagrees with Prof. Cook, who thinks all honey-dew is the production of aphides. The honey-dew seems to be much the same thing as the nectar of the flower, only found in a different place. He speaks of the change of material into starch, then into sugar, and then into woody tissue, and says:

"From the saccharine stage of digestion comes our *honey* and *honey-dew*. The former is in some manner, as yet unexplained, determined to the flower, while the latter is the result of the sap-cells, under certain atmospheric conditions, becoming gorged, when a portion of the sweet juice they contain exudes thru the pores of the leaf and green shoot, and rests on their surfaces—hence our honey-dew."

Weed Foundation.—C. Davenport, in Gleanings in Bee-Culture, says that after making most of his foundation for years he shall probably buy instead of make in the future. The great difference between the price of wax and foundation is more than offset by the amount of work in rigging up, properly purifying the wax and making into foundation. For bottom starters he has found the Weed much better than his own, and in one case he gave it a very severe test. He put small, three-cornered starters at the top, and at the bottom about as narrow starters as could be fastened with a Daisy machine, and not six out of a thousand failed of being accepted, drawn out, and fastened to the upper one as soon as it was built down low enough. The severe point in the test was that this was at a time when the flow was scant and irregular.

This certainly shows superiority in the Weed foundation, for with the older kinds there was complaint that when the bottom starter was thin it would topple over or be gnawed down by the bees unless the top starter came close down and there was a fair flow of honey. The A. I. Root Co. say they can now furnish in quantity the Weed foundation running 18 feet to the pound with fair sidewalls, and if this will be used by the bees without being gnawed in a scant flow, and will stand up when used for bottom starters, there surely ought to be no more trouble about "fish-bone."

Bee-Paralysis in the South is a very serious matter, much more serious than Northern bee-keepers are likely to imagine, for in the North it amounts to very little. In the South, Editor Root thinks it may be even worse than foul brood, two bee-keepers to his knowledge having been driven out of the business by its ravages. O. O. Poppleton, of Florida, says in Gleanings in Bee-Culture that he can cure it, but at the expense of any income from the colony for the season. In a number of cases Mr. Poppleton has found the daughters of purchast queens to give the disease to their colonies, altho the colonies of the mothers may have remained healthy. The queens were obtained from reliable men, and he has no idea that paralysis was suspected by the sellers, even if it existed.

Bees Photographt in Glass Hives is the heading of an article in the Canadian Bee Journal copied from the Buffalo Courier. It gives a somewhat detailed account of observations to be made (by whom is not mentioned), deciding unsolved problems about bees. Among other things, when a bee leaves the hive, it passes thru a vestibule where its weight is accurately determined, "a delicate mechanism" marks the bee with color, and on its return its weight is again taken to measure its load. Just how much dependence may be put in the whole affair may perhaps be judged from the somewhat amusing statement that one of the things to be studied is "the curious method by which the bees are enabled to 'construct' queen-eggs when the regular queen-eggs have been destroyed and there is no resident queen to lay others." How's that?

Covering for Hive-Roofs.—J. A. Green has reported very favorably as to the use of corrugated sheet-iron over his hive-covers. On this matter a writer in the British Bee Journal says: "I note that the question of the advisability of using thin zinc as a covering for hive roofs has been raised both in the Bee Journal and Record. If your correspondents mean a wood-roof covered with zinc laid close down, and turned in at corners and edges, let me say I adopted that plan, and my experience is that roofs so covered prevent rain entering from the outside, but, owing probably to the continual condensation of moisture, these roofs were always damp inside, altho in my case they have the usual ventilating holes fore and aft. To avoid this fault, I last summer covered the roofs of two hives with cuttings of corrugated-iron roofing, simply laying them loose on top and weighting down. In March last both roofs were quite dry.

"If we could get thin galvanized iron (say 24-gauge) with small corrugations, I think it would answer well, as it is the want of free circulation of air beneath the zinc that causes dampness, and this is obviated by the use of corrugated iron."

Drone-Cells vs. Doolittle Cups.—Editor Root having said, "without artificial cups nothing could be done," W. C. Gathright replies in Gleanings in Bee-Culture:

"I have been rearing cells by the Doolittle plan for three years, in upper and lower stories, with the laying queen in the hive all the time. I have not made an artificial cell for two years, and would not think of going back to that plan. I use strips of drone-comb with the cells cut down half depth, and place a larva in every other cell. This gives room to cut them apart. I often get every cell accepted, and as many as 22, tho I destroy all but about 12 or 15. I make a frame with top-bar and ends only ½-inch wide, and do not put on a bottom-bar, but put in a bar about ⅜ square, half way between the bottom and top. This middle bar is to fasten the strips of drone-comb to.

"I next cut my drone-comb in strips about ⅜ wide and 4 inches long. I use three pieces for each frame. To fasten them to the bar I use melted wax. I dip each piece into the wax, first letting the edge of one side touch the wax, when it is placed on the bar, and it is fixt perfectly solid in a moment. I can fasten a strip of drone-comb in the same time it would take to fasten one artificial cup."

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Why Take a Bee-Paper?—The editor of Bee-Chat having askt for reasons for taking a bee-paper, one of his correspondents replied:

"1. Because it keeps me abreast of the times.

"2. Because by enquiry in its columns I can get information on any unusual difficulty that may arise in my apiary.

"3. Because I can help to provide the editor not only with the sinews of war by my subscription, but also add to his moral support by increasing his clientele."

There is every reason why a bee-keeper should read a good bee-paper, while there is likely no reason why he should not. How any one can expect to be successful with bees, and not read the best current bee-literature is beyond our comprehension.

Correspondents of Bee-Papers.—Referring to an editorial in these pages as to the smaller number who write for the bee-papers nowadays, Editor Root, of Gleanings in Bee-Culture, says bee-papers are run for the benefit of subscribers and not correspondents; so the editor must get the best he can, and, as many of the best bee-keepers either have not the faculty or have not the inclination to write what they know, the number of writers has become limited, and it is the business of the editor to keep the few who do write from running their followers into ruts.

Per contra, a writer in the American Bee-Keeper asks that a page be set apart for amateurs, and the editor announces that a department will be started for amateurs as soon as material enough comes to hand for it, all intended for it being markt by the writer, "Amateur Department." This will relieve the editor from the delicate task or sorting out the amateurs from the others.

While amateurs are fully represented in the American Bee Journal, they are allowed to mix in freely with the rest of the family.

The Chapman Honey-Plant is still talkt of as a valuable new thing in some of the foreign bee-journals. Is there any one in this country who continues to believe it worth cultivating?

Bee-Keeping a Studious Occupation.—G. W. Demaree says in his department in Barnum's Midland Farmer, that facts show that there are more failures in bee-keeping than in other domestic pursuits. He thinks the reason is that it requires closer study and greater skill to handle bees profitably than most bee-keepers are willing to afford. The most successful bee-keepers are those who have a natural taste for the study of insect life, with some inclination toward botany.

The Honey Market.—Quotations have held up pretty stiffly thruout the past year, but at present they hardly seem in proportion to the scarcity of honey that reports indicate. Editor Root says in Gleanings in Bee-Culture:

"From present indications the season over the country generally will be even poorer than that of last year, and we thought 1898 was about as poor as it could be. Comb honey—at least a choice article—ought to be sold at a higher price than it has sold for for several years past."

But the commission men and dealers make quotations that show no advance in price. Are they doing the right thing by their clients?

Advertising the United States Bee-Keepers' Association.—Editor Holtermann, of the Canadian Bee Journal, endorses what H. F. Moore has said in the American Bee Journal about keeping the craft fully informed as to what the United States Bee-Keepers' Association is doing; but he does not agree that it would be a good plan to have the manager or secretary of the association send copy to one bee-paper with the request that the others copy. Mr. Holtermann wisely suggests that the better plan would be to send to all bee-papers at the time when most of them would be ready for copy. A bee-paper would be more interested to publish information sent to it direct, even if all others were to have the same matter, than to copy that matter after it had been printed in some other paper.

Success Thru Reading and Thinking.—Prof. D. H. Otis, of the Kansas State Agricultural College, gives some excellent hints in the following paragraphs:

Among the questions askt of creamery patrons by the Kansas Experiment Station is, "What dairy or farm paper do you read?" Out of 77 patrons who answered this question we found that 53 (or 69 percent) took no farm or dairy paper. In looking up the details of the records it is interesting to note that the highest yield was made by a man who keeps special dairy cows and subscribes for a dairy paper. This patron realized $9.00 per cow per annum more than the next best patron who reads no paper, and $36 per cow more than the poorest patron.

In collecting records from various parts of the State we find where intelligence is applied to the dairy industry the cow is yielding from $60 to $80 worth of dairy products per annum. Contrast this with $20 to $30 without intelligence and no one need ask if education pays. At the Kansas Experiment Station we find that intelligence applied to feeding calves will cause them to gain from 12 to 23 pounds per

week instead of 7 to 10 pounds. This is an age when intelligence can be turned into cash, when, as Secretary Coburn says, "Muscle to win must be lubricated with brains."

D. H. Otis.

Some one asks, "Well, what has that to do with bee-keeping"? We answer, everything. Why shouldn't intelligence and brains, when applied to the care of bees and the production of honey, be equally successful?

We feel sorry for the bee-keeper who takes and reads no paper devoted to bee-culture. He stands right in his own light, and cannot possibly hope to compete successfully with the bee-keeper who reads and studies, and then uses his increast intelligence in conducting the apiary. This is an age when to be able to compete in the struggle for an existence and subsistence, a man needs to avail himself of every advantage possible, and nothing can be more helpful in the race for success than a good supply of intelligence properly applied.

"Buckwheaters" and Grading.—An interesting conversation between Editor E. R. Root and Mr. S. A. Niver was taken down in shorthand, and is reproduced in Gleanings in Bee-Culture. "Buckwheaters," as Mr. Niver calls those who have large crops of buckwheat honey, as many do in New York State, have conditions quite different from others. Bees usually go into winter quarters "loaded clear to the brim" with buckwheat honey. From the time of soft maple in the spring there is always something coming in, so that if a colony dies in winter its combs of honey are not needed to supply other colonies, and being extra-ripe and good may be extracted. Mr. Coggshall extracted 3,000 pounds of such honey from colonies that died the past winter.

Grading was discust, Mr. Niver not agreeing with Mr. Root that there ought to be a special grade for sections filled out clear to the wood. He thought it would only confuse, the amount being so small, and advised that such honey be eaten at home, altho he thought a section really nicer that had no honey in the outside row of cells. To get sections filled and sealed clear to the wood requires that the bees be so crowded that such sections will cost more than the extra price that can be obtained for them.

The Honey Season in Canada seems poor as well as on this side the line. The Canadian Bee Journal says:

"The Canadian crop has not been all harvested; frequent showers may give a good deal of thistle honey, but so far the clover honey crop has not been up to expectations; conditions seemed to be all favorable, but did not pan out."

The editor thinks no one need to sacrifice his honey crop in order to dispose of it.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

The Philadelphia Convention, to be held Sept. 5, 6 and 7, in Franklin Institute, 15 South 7th Street, between Market and Chestnut Sts., promises to be the best ever held by the United States Bee-Keepers' Association, if we may judge by the excellent program arranged for the occasion. Also in view of the low railroad rates guaranteed to every one going to Philadelphia, Sept. 1 to 4 inclusive, there should be a very large attendance. The editor of the American Bee Journal and Dr. C. C. Miller, with other bee-keepers, will go over the Pennsylvania Lines, beautiful illustrations of whose entrancing scenery and elegantly equipt coaches we have the pleasure of showing on our first page this week. Without doubt the Pennsylvania Lines run thru the finest country for scenic beauty to be found in all the East.

The Grand Army of the Republic holds its 33rd annual meeting in Philadelphia, Sept. 4 to 9, inclusive. Many bee-keepers are also old soldiers, and likely members of that splendid national organization of war veterans; all such, as well as other bee-keepers, should take advantage of the low rates secured by the G. A. R. people, and be in Philadelphia during the week of the Grand Army meeting and the bee-keepers' convention. The round-trip rate from Chicago, over the Pennsylvania Lines, is only $16.45. That means you will be given a ride of 1,645 miles.

The Grand Army Encampment will be noteworthy in many ways. It is expected to be the largest ever held. For the first time since the occurrence of the events which gave birth to the Grand Army of the Republic, the Stars and Stripes have again been carried to victory, and the fire of patriotism again burns with a bright and steady flame which will induce many veterans, their families and friends, to attend this annual reunion.

Extensive arrangements are being made for the entertainment of visitors to the City of Brotherly Love on this occasion, and the exercises will be of unusual interest.

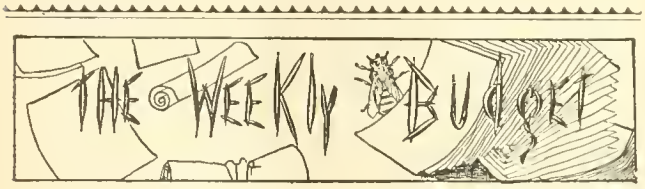
The festivities of the week will be inaugurated by a parade of Naval Veterans on Monday, Sept. 4. The grand parade of members of the Grand Army of the Republic will occur on Tuesday, Sept. 5. On the evening of that day the reception will be held. The President of the United States, the Governor of Pennsylvania, the Mayor of the city of Philadelphia, Admiral Dewey, Gen. Miles, and a long list of distinguisht statesmen and officers of the Army and Navy are to be present. The "Dog Watch" of Naval Veterans will be held Wednesday evening, Sept. 6, and on Thursday evening, Sept. 7, the National Association of Union ex-Prisoners of War will hold a camp-fire. Wednesday and Thursday, Sept. 6 and 7, will be given over to reunions of societies and business sessions of the National organizations. A great Naval Review, the grandest event of its kind, will take place on the Delaware River, Friday, Sept. 8.

Sight-seeing side-trips will be the order after the Encampment terminates. Many interesting places will be found near Philadelphia, where time may be pleasantly and profitably spent. Valley Forge, famous in the Revolutionary period of the Nation's history, is only a short distance from the city, and at League Island, another near-by point, may be seen the old-time and the new war vessels. Special rates will be made from Philadelphia to Gettysburg, Baltimore, Washington, and from Washington to the battle-fields of Virginia. Also to Old Point Comfort, Va. Daily excursions to Atlantic City and the famous seashore resorts along the Atlantic coast are run from Philadelphia over the Pennsylvania Double Lines to the Sea.

The great Pennsylvania route leads thru interesting

farming communities and pretty cities and towns in the Hoosier and Buckeye States. On nearing Pittsburgh it skirts the banks of the Ohio River before entering Union Station in the center of that city. From Pittsburgh the route passes scenes of industrial activity which have been likened unto the heart-throbs of America's manufacturing. Vast iron and coke interests spread out in pleasing panorama as the trains glide onward toward the romantic Allegheny Mountains. The tragic scenes of the flood-swept Conemaugh Valley have left their imprint in that historic vale. Traces of the memorable deluge are noticeable at and near the rebuilt city of Johnstown. At Cresson the Alleghenies are crost in the highest point above sea level. Horseshoe Curve, a marvel of mechanical engineering, is rounded on the eastern slope of the Alleghenies. The "Blue Juniata" River is followed through regions of enchanting grandeur. Just west of Harrisburg the Susquehanna River is crost on one of the longest and most substantial railroad bridges in the world. The country between that city and Philadelphia embraces some of the finest agricultural sections of America.

The best trains over the Pennsylvania Lines leave Chicago daily at 3:00 p.m. and at 11:30 p.m. Grand Army rates going are in effect Sept. 1, 2, 3 and 4. We expect to leave on the 3:00 p.m. train Monday, Sept. 4, which arrives in Philadelphia the evening of the next day at about 6:00 o'clock. We should be pleased to have any bee-keepers or others west of Chicago go with us on that train. If you desire it, we will be glad to make any advance arrangements for you that you may wish, so that you can be sure to make connections with the train that leaves Chicago at 3:00 p.m., Sept. 4, or on the one starting at 11:30 p.m.



Rev. E. T. Abbott, of Missouri, expects to be at the Philadelphia convention.

* * * * *

Mr. Elvert W. Haag, of Stark Co., Ohio, wrote us Aug. 5: "Bees did very well here this season."

* * * * *

Mr. R. B. Leahy, of the Leahy Mfg. Co., called on us last week, when on his way on a business trip thru Wisconsin. Mr. Leahy reports a most satisfactory season's bee-supply business. He looks as if he had been overworking in order to take care of the trade that came his way this year. But a man can stand a good deal of a strain for quite awhile if business is rolling in his direction.

* * * * *

Mr. A. I. Root expects to spend a week or ten days in and around Boston, about the 15th to the 25th of this month. It is during the time of the meeting of the League of American Wheelmen in that city. It's just wonderful how that "60-years-old boy" gets all over this country. One time he is in Yellowstone Park, and the next time you hear from him he is in the city noted for its "larnin'" and baked beans! A *root* is generally supposed to be grounded pretty well, but this Root seems to thrive just as well, or better, when moving around on top of the ground or water.

* * * * *

Mr. G. M. Doolittle and his work are referred to as follows by "Stenog" in Gleanings in Bee-Culture for July 15:

"Writing to Mr. York, Mr. Doolittle says: 'I am fearfully driven with work now, and I have sore eyes and a lame back to make work as uncomfortable as possible.' I have always felt it was a pity that Mr. Doolittle should spend his useful life in doing his own work instead of hiring help. If he had secured help during the last 20 years, and had merely supervised his work, I am confident tha at cipher would now be standing on the right side of every "$1" he can show. I do not see how any man can write as much for the press as he does without a stenographer, to say nothing of the great amount of work he does in his apiary and on his farm. I am speaking in general terms, of course, for perhaps Mr. D. knows his own business better than I do."

* * * * *

Mr. G. W. Brodbeck is one of California's best known bee-keepers. In Gleanings in Bee-Culture for Aug. 1, J. H. Martin had this to say about Mr. Brodbeck and one of his dogs:

"Mr. Brodbeck and I have been sort o' neighborly and sociable this season. He moved his bees into an adjoining canyon, within easy visiting distance, with some hopes of securing a little honey. But his hopes are blasted along with the rest of us, and I think they are a little blasteder, for he is not only minus a honey-yield, but minus one of those bull-terrors. The poor dog fell into a reservoir and was drowned. It is supposed that the dog, being old and feeble, and his tail becoming so animated at the sight of water, it wagged the body into the reservoir."

* * * * *

Pres. E. Whitcomb, of Saline Co., Nebr., in a letter dated Aug. 5, says he is going to the Exposition now in operation at Omaha, "in order to procure Indian dancers for the Philadelphia meeting." But we should think that unless Mr. Whitcomb has stiffened up a good deal in his joints the past year *he* could do all the Indian dancing that the program will call for at Philadelphia. Still, he may need the presence of a few Indian partners to help get up his enthusiasm.

Referring to local apiarian matters, Mr. Whitcomb says:

"The honey crop is very light, and with poor prospects for the future. During the early spring we had to hustle against foul brood, but found no case that did not succumb quickly to the starvation treatment, and have done pretty well since."

* * * * *

Mr. E. W. Brown, of Erie Co., N. Y., has been giving in Gleanings in Bee-Culture something of his experience with bees. In one issue he also told "how to put energy into a slow poke of a horse," which he used for peddling honey. Mr. Brown, being an electrical expert, and electricity being such a wonderful power these days, it is not surprising that he discovered a way in which to apply the current so as to sort of revivify a run-down horse. He explains it thus:

"The season last year was a poor one here as well as in most parts of the country; but with my 40 colonies, and 10 not mine, I produced three tons of honey, mostly comb, in plain sections, and increast to 60 full colonies and 5 weak ones. Of course, I had a fair fall flow. When I saw all this honey coming in I began to wonder how I could dispose of it. Dr. Miller says there are two things that bee-keepers are most interested in: 1. How to get a crop of honey; 2. How to get rid of it. I soon decided how I would get rid of my crop. I lookt around till I found the best ten-dollar horse in the county. It had but a single fault—it wouldn't go. It would "whoa" better than any other horse I ever saw. After I bought the horse the former owner said that it was just a little inclined to be lazy. Perhaps electricity would be indicated in this case, I thought; and so one day I proceeded to attach concealed wires to the harness in such a way that I could, by pressing a button in the wagon, give the horse a mild electro-stimulus under its tail from a medical induction-coil run by dry batteries. This arrangement proved to be a great success, and it increast the value of the horse 175 percent. I can now overtake and pass anything on the road, to the great astonishment of the people who know the past record of the horse. One touch of the button furnishes sufficient ambition for a mile journey. I now seldom have occasion to touch the button, for the horse is nearly cured of its loss of ambition. When I speak it gives two switches of its tail, and away it goes. I have made good use of this horse in disposing of my crop; and as I now have an out-apiary four miles away, it will be a valuable help to me this coming season."

Mr. Brown should get a patent on his method of applying electricity in such a way as to overcome lost ambition in a horse. Wonder how it would affect a lazy man, if properly applied. Try it on—well, some other man besides Hasty, for if he is as quick as his name he doesn't need electricity around him.

Root's Column

HONEY WANTED.

We are in the market for both comb and extracted honey. If you have any to offer, let us hear from you **AT ONCE** stating the grade, number of pounds of each grade, from what source gathered and **HOW** it is put up. If extracted, send a sample by mail. . . .

We Handle

Several Carloads Every Year....

and may be able to refer you to a buyer if we cannot handle it ourselves. . .

See our ad in this column for July 6th issue for

Honey-Packages...

Five-gallon square Cans are now $7.00 per ten boxes instead of $6.00.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

In the multitude of counsellors there is safety.—Prov. 11-14.

How to Get Rid of Ants.

Query 100. Do you know of anything that will destroy ants—something that will annihilate them entirely?—ANON.

W. G. Larrabee—No.

J. A. Stone—Carbolic acid.

D. W. Heise—I do not. Who does?

Dr. C. C. Miller—Bisulphide of carbon.

Prof. A. J. Cook—Yes; bisulphide of carbon.

Mrs. L. Harrison—Pour kerosene in their nests.

C. Davenport—No. Ants never injure bees here.

Eugene Secor—No, not that I care to recommend.

S. T. Pettit—Yes, I do. Give them lots of boiling water.

Mrs. A. J. Barber—We have had no experience with ants.

Emerson T. Abbott—No. Fire will reduce them to ashes.

J. M. Hambaugh—Coal-oil or carbolic acid, properly applied.

P. H. Elwood—Call on Dewey. They don't like salt very well.

O. O. Poppleton—No, except they are so situated that hot water can be used.

G. M. Doolittle—No. They do so little harm with me that I have ceast to fight them.

R. C. Aikin—Kerosene emulsion fixes every one you can hit, but I never get all of them.

R. L. Taylor—I think fire would be as near what you are seeking as anything mundane.

E. France—Put them into boiling water, every last one of them; or take a hatchet and chop their heads off.

J. E. Pond—I do not. Many plans are given in the bee-papers, but I have never had any serious trouble with ants.

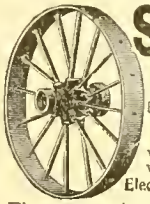
Rev. M. Mahin—Fire will do it, but the application is not always easy. Salt and water will keep them away from the bee-hives.

E Whitcomb—Find their nests and dose with kerosene. Rub lightly on top of the blanket and on the outside of the hive where they run.

J. A. Green—Bisulphide of carbon poured into holes made with a crowbar in the ant-hill, then covered with a flat stone or brick, has proven very effectual.

Mrs. J. M. Null—No. That is, that will destroy them but will not destroy the bees. Sugar and arsenic mixt together will be found equally effective in the destruction of both.

A. F. Brown—For practical and general use, no. Bisulphide of carbon, also kerosene, if poured in or over their nests will destroy them, but are too expensive; and,



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BUY A SET TO FIT YOUR NEW OR OLD WAGON

CHEAPEST AND BEST

way to get a low wagon. Any size wheel, any width tire. Catal. FREE.

Electric Wheel Co., Box 16 Quincy, Ills

Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

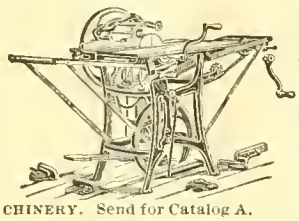
Queens 5-banded Queens

by return mail, 50 cents each, $6.00 per dozen. Tested, $1.00 each. I have no 3-banded Queens or 3-banded drones in my yard this season. Am making a specialty of rearing only 5-banders.

DANIEL WURTH,

33D2t **Falmouth, Rush Co., Ind.**

Please mention Bee Journal when writing.



UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

Please mention Bee Journal when writing.

Greenwood Apiary For Sale Cheap.....

Good location; bee-cellar that holds 300 colonies; bee-house 18x30 feet, two-story. Best of bee-pasturage; bees all for extracted honey, and have produced in this location 85 barrels honey in one season. For particulars write to

32A2t **HERBERT CLUTE, Greenwood, Wis.**

Please mention Bee Journal when writing.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Warranted Queens, $1.00; Untested, 75 cents.

9A26t **J. D. GIVENS, LISBON, TEX.**

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Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT FAIL

Before placing your order, to send me a list of what you need in

Foundation, Sections,

And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

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CHEAP FARM LANDS

Located on the Illinois Central R. R. in

SOUTHERN ILLINOIS

And also located on the Yazoo & Mississippi Valley R. R. in the famous

YAZOO VALLEY

of Mississippi—specially adapted to the raising of

CORN AND HOGS.

Soil Richest IN THE World.

Write for Pamphlets and Maps.

E. P. SKENE, Land Commissioner,
Ill. Cent. R. R. Co., Park Row, Room 413,
30A16t CHICAGO, ILL.
Please mention Bee Journal when writing.

THE AMERICAN
Institute of Phrenology,

Pres. MRS. CHARLOTTE FOWLER WELLS, incorporated in 1866, opens its next session on Sept. 5, 1899. For prospectus send free on application to the Secretary, care of

FOWLER & WELLS CO.,
27 East 21st St., NEW YORK.
27A9t Please mention the Bee Journal.

300 Selected Golden Italian Queens

large and yellow all over, warranted purely mated, reared by Doolittle's method, Queens by return mail, safe delivery and satisfaction guaranteed: have 11 years' experience. Price of Queens, 75 cents each; 6 for $4.00; or $7.00 per dozen. Order quick, as above queens are young and will soon be taken. Read testimonials:

ROMEO, Mich., July 10, 1899.

MR. QUIRIN—Dear Sir:—The queens you sent me have turned out the yellowest bees in my apiary, are gentle to handle, are large and well markt. C. C. CHAMBERLAIN.

BLOCKLY, Iowa, July 5, 1899.

MR. QUIRIN Dear Sir:—The queens I got of you last year are giving good satisfaction, better than some untested queens I paid $1.00 for, to breeders who sell for no less at any time of year.
Yours truly, EDWIN BEVINS.

Address all orders to
H. G. QUIRIN, Parkertown, Erie Co., Ohio.
30A16t Money Order Office, BELLEVUE.
Please mention Bee Journal when writing.

BEE-SUPPLIES.

Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor—in fact everything used by bee-keepers. Send for our Catalog.

C. H. W. WEBER,

2146 Central Ave., CINCINNATI, OHIO,
Successor to
CHAS F. MUTH & SON and A. MUTH.

WANTED!

EXTRACTED HONEY

We are now in shape to **buy** Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank — The Brighton German Bank Co., both of Cincinnati, O.

27Atf Please mention the Bee Journal.

again, one cannot always find their homes. There is a large red ant that annoys bee-keepers very much along this (Florida) coast. These ants will sometimes destroy a good colony of bees in a few nights, or even in a single night's attack.

C. H. Dibbern—Early in the spring when the ants appear on the surface is a good time to destroy them. Dig a hole into their nests, and pour in ½ pint of gasoline—it will fix 'em.

Adrian Getaz—Yes, "Rough on Rats" mixt with honey will do the job. A wire-cloth should be placed so as to prevent the bees from reaching the "stuff." The ants can crawl in thru the meshes.

Dr. J. P. H. Brown—If their nests are under or near the hive use scalding water. Follow with a thick coat of quick-lime or tobacco-dust. If your hives have legs, or set on benches with legs or supports, paint around these with a solution of corrosive sublimate, and the ants will not pass over.

Dr. A. B. Mason—Yes, boiling hot water poured on their nests until completely saturated, or coal-oil. Where a quilt and a cover are used the ants will frequently do a "land office business" rearing nuts between the quilt and cover. A little lime sprinkled where they congregate will effectually drive them away.

G. W. Demaree—O, my friend, you ask too much, unless you will permit me to suggest dynamite and blow up Old Earth. Practically, however, you can control the ants that infest your bee-hives, etc., by smearing wet salt in all their lurking-places. It is a little trouble, but it pays me largely for the extra labor.

E. S. Lovesy—I confess that I am stalled on this question. I have used cyanide of potassium, sulphur, salt-peter, vitriol, carbolic acid, strychnine, arsenic, London purple, Paris green, and many others, and I have destroyed many millions, yes, many bushels; but when we come to the scope of the question—a total annihilation of this pest—I have failed to accomplish the desired result. I have heard that there is a powder that will destroy them, which makes them crazy, so that they will kill each other, but so far I have not been able to find it. If any of our friends can solve this secret we will treat them like a prince, if they come our way.

GENERAL ITEMS

Good Surplus Honey Crop.

We had severe winter losses here, but what we had left built up rapidly, and a good crop of surplus honey is now being taken off, principally from sweet clover, basswood and white clover. We have had fine rains, and the prospects for a fall honey crop are fine. The price of comb honey is 12½ cents per pound. KANKAKEE.
Kankakee Co., Ill., Aug. 3.

Doing Moderately Well.

Bees are doing moderately well here. They stored some surplus from alfalfa bloom, but the webworm is fast destroying both bloom and leaf. The worms are also destroying kaffir corn.

I have a good home market for all the honey I have produced so far. I am getting 15 cents a section for it. We have had the wettest July on record.

W. H. MEANS.
Greenwood Co., Kans., July 31.

Experiencing the First Failure.

For the first time since I have become interested in the management of bees for profit, failure is practically stampt on everything apicultural in this part of Can-

SUFFERERS

FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO,
34 Central Music Hall, CHICAGO.
Write at once. Enclose return stamp.

Gold! Gold! Queens!

Leininger Bros' Queens are worth their weight in gold; large, prolific, yellow, and great RED CLOVER workers. We have secured 112 pounds of honey per colony as the result of the past poor season. Queens from the above strain will be sent by return mail at 50 cents each; ½ doz., $2.90. Queens warranted purely mated Italian.
LEININGER BROS., Ft. Jennings, Ohio.
33Atf Please mention the Bee Journal.

☞ IF YOU WANT THE
BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

QUEENS

Either 5-banded, Golden or from IMPORTED Italian mothers, 60c each; or 6 for $3.00. A few fine breeders at $1.50 each. Give me a trial and let me surprise you. Satisfaction or no pay. CHAS. H. THIES, Steeleville, Ill.
33Atf Please mention the American Bee Journal.

BEE-KEEPERS!

Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

The A. I. Root Company

HAVE ONE OF MY

Hundred = Dollar Queens,

but I have two others from which I am rearing all queens. The A. I Root Co. say

THE BEST BREEDING QUEENS

they ever had came from my apiary, and so say 5,000 other bee-keepers, and I can produce the letters backing up this statement. I have bred out the swarming and vicious characteristics from my strain of bees so that they are practically non-swarmers, and as gentle as one could desire. One Queen, $1.00; two Queens, $1.80; six Queens, $5.00, or $9.00 per dozen. Everything guaranteed.

HENRY ALLEY,
33Atf WENHAM, ESSEX CO., MASS.

Better than Ever

Am I prepared to furnish everything needed by the up-to-date bee-keeper, all goods manufactured by THE A. I. ROOT CO., shipt to me in car lots, and sold at their prices. Send for illustrated, 36-page Catalog FREE.

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17A17t FREMONT, Newaygo Co., MICH.

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Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

Golden Italian Queen Free For sending us One New Subscriber.

To any one who is now a subscriber to this journal, and whose subscription is paid to the end of 1899, or beyond, we will mail a Golden Italian Queen free as a premium for sending us **one new** subscriber for a year, with $1.00 to pay for same.

Address, GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

ada. Spring weather opened favorably, but unfortunately a large percentage of the bees had wintered poorly; however, during fruit and dandelion bloom they began to build up nicely. The clovers were pretty much all winter-killed, and what little survived failed to secrete very much nectar—barely enough to keep the bees alive.

Of course, our hopes for a harvest were built on basswood, which promist well, but it has come and gone, and we find most of our supers untoucht. The atmospheric conditions have been peculiar, inasmuch as cool weather is concerned. While we have had abundant rains, yet not too much at any time; and while the days were sometimes very warm, yet the nights were always cool, and sometimes even cold. This low temperature at night, I think, is largely responsible for the light honey-flow.

But notwithstanding my light surplus of only six pounds on an average per colony, I am pleased to be able to say that the prospects are now good for the bees filling up their hives nicely for winter, for which we are very thankful indeed. I am also pleased to say that honey-dew has not made its appearance thus far. Swarming was very light so far as I have learned thruout the Province. D. W. HEISE.

Ontario, Canada, Aug. 5.

Bees Doing Well.

My bees are doing well. I saved two out of ten colonies last winter, and now have six, all working in supers. I have taken 72 pounds of honey from one colony, and will get two supers more from the same. Pretty good, isn't it? D. R. CRALL.

Du Page Co., Ill., Aug. 7.

Fairly Good Prospects for Honey.

The prospect for a honey crop hereabouts is fairly good, tho the bees did not begin work in the supers until nearly July. But tho the crop will be fair there will not be enough for home demand, on account of the greatly diminisht number of colonies.

Bees have not swarmed much on account of the poor prospects in June, and when the harvest came it was so sudden that the bees lent their whole energy to the gathering of it. I have 10 colonies now, an increase of only two new swarms. This is what is left of 30 put into winter quarters last fall. S. H. HERRICK.

Winnebago Co., Ill., July 25.

Foul Brood—Careless Bee-Keepers.

Bees free of disease are doing well. White clover yields finely this year. Alfalfa is cut usually just as it is ready for the bees. Foul brood seems to be driving the bee-business out of the hands of the common farmers, as not one in ten will follow the inspector's instructions and clear their apiaries. An apiary that last year contained 80 colonies was reduced by foul brood to 29, and nearly all of these were foul; all were shaken into clean hives and frames, and built up, equalized, and now we have 24 all on newly-built combs; these bid fair to store enough for winter.

We use a large solar wax-extractor 3x6 feet to melt the combs and honey out of the frames; even the candied and thick honey runs when the sun shines direct. (The brood and all foulness is cut out first.) The honey tho somewhat dark is quite good. The frames and slumgum will be boiled later, and the wax taken out with hot water and a press.

We find few bee-keepers who will pay for bee-papers, and this discourages us in trying to educate them, but we are at home among the bees. A. T. FOSTER (Inspector.)

Boulder Co., Colo., July 28.

Italian Queens

Reared from the best 3-band honey-gatherers by Doolittle's method. Prices—45 cents each; ½ dozen, $2.50; one dozen, $4.50. SAFE ARRIVAL.

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BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

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Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

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(SEMI MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,
Wainwright Building, ST. LOUIS, MO.
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PAGE

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find exactly the fence you want, write us. We think we make it, and if we don't, **we can try.**

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Please mention Bee Journal when writing.

Honey Wanted.

We want to correspond with parties who have it to sell in large or small quantities. Address, giving source gathered from, style of package, quantity offered and price crated and delivered to your depot.

THOS. C. STANLEY & SON,
32Atf FAIRFIELD, WAYNE CO., ILL.
Please mention Bee Journal when writing.

Rather Short White Honey Crop.

There is a rather short crop of white honey this year. It was largely caused by dry weather. I hope for a good crop from buckwheat and fall flowers. Many colonies were weak, owing to severe winter.

CHAS. B. ALLEN.

Oswego Co., N. Y., July 26.

Bees Have Done Nothing.

Bees have done nothing so far, even worse than last year at this time. I think in this part of the country we lost fully 75 percent of our bees, and if we do not get a good fall flow of honey, next winter will finish many more colonies. I fed my bees a good deal, a part of the summer.

D. J. BLOCHER.

Stephenson Co., Ill., July 28.

Bees Doing No Good.

Our bees are doing no good thus far this summer. We fed about $12 worth of white sugar last spring, and have to feed again to keep the breath of life in some of the colonies, altho the first of June they were in the best of condition. All around us are many acres of red clover in full bloom; just across the road from our farm is a large field of 20 acres of red clover in blossom, but bees seem to get nothing from it. There seems to be some white clover, but the most of it was of this year's growth, and then the weather did not seem to be quite right while it was in blossom.

We have too many colonies in one place, I think, and we will unite and reduce the number as fast as we can. If put up at sale they bring but about $1.50 to $2.00 a colony, and I think it will pay best to unite all small and dark-colored colonies, and keep the combs for spring feeding, as we think they will get some honey yet this fall. We have now 140 colonies.

To care for bees at our out-apiary is very laborious, and we had to pay from $10 to $20 for the privilege of keeping them in a man's orchard, and if they failed to get a crop we felt it worse than when kept at home. I

don't know as they fail of a crop any oftener now that all are at home, than when kept in two apiaries. But when all are kept at home we don't feel the failure of a honey crop as we do when having them away from home, as we do not need to work with them much.

As we so often have a failure of the honey crop, it seems to me no one should engage in bee-keeping without some other industry to go along with it, except in favorable localities. A few colonies of bees may be profitably kept along with almost any other pursuit. It discourages people to keep them alone.

We are feeding now out-of-doors in a shallow box that holds about 3 pails of syrup, granulated sugar mixt with water, and the box has lath nailed together with little blocks between them to keep the bees from swamping in the syrup. They will take that amount up in less than an hour, and before I can get it all poured in they begin to come for it; in 5 minutes after poured in, the box or trough is covered with bees, but they are very peaceable about it. I feed at all hours, or when it is convenient. Feed but once a day, about a tablespoonful to the hive. It is but a little bother to feed in that way.

MRS. L. C. AXTELL.

Warren Co., Ill., Aug. 2.

Getting Bees into Sections.

As I have read with interest the discussions of large and small hives, and the likes and dislikes for the shallow extracting-frame, I will tell you how I manage, mine with success.

I use the 8-frame dovetail hive, and the shallow frames, for starting the bees in the sections. I put the shallow frames on as soon as the bees get crowded; in a few days they will rush the honey up to make room below, then as soon as the flow comes I raise the super and place the sections under. When the sections are well started, extract the frames, and place them back in the super. Now raise the hive and place the super underneath. This makes room for the queen. By cutting out queen-cells once I kept down swarming this season, and my best colony gave me 60 pounds of clover honey. My colonies are very strong in bees.

I think a good deal of the "Old Reliable."

A. A. WENNEKER.

Montgomery Co., Mo., Aug. 7.

Not a Very Good Season.

I have 80 colonies of bees at present, and am getting two shipments per week from Wiscousin. The season here so far has not been very good, as we have had too much rain, but the prospects are good for a fall flow from asters, fireweed and Spanish-needle.

I can't get along without the "Old Reliable" E. C. NOLAN.

Midland Co., Mich., July 31.

Not a Good Season.

The season has not been a good one for bees in this locality. The spring was late, and there was too much rain in May and June. Conditions are improving. I bought one swarm in the spring of 1898, captured another, and bought two more this spring, and I now have 14 colonies, all doing well, and some of them busy in the sections.

CHAS. W. WOLBERT.

Union Co., S. Dak., Aug. 1.

Fair White Honey Crop.

Bees are gathering but little honey now, tho if we had a rain they would make a living until buckwheat bloom.

The crop from white clover was fair both in quality and quantity. Sweet clover is still in bloom, but bees work on it but little except in early mornings. H. G. QUIRIN.

Erie Co., Ohio, Aug. 2.

Bees Have Done Poorly.

This part of the country was visited by a terrific hail and wind storm July 6, which took my entire farm crops. My bees have done very poorly; there was no basswood honey, still the trees bloomed profusely. I have six colonies of hybrid and black bees. I intend to get six Italian queens this fall and Italianize my bees, which I transferred from the woods. C. A. WARNER.

Kandiyohi Co., Minn., Aug. 2.

Not Doing as Well as Last Year.

Bees are gradually filling their supers, but are not doing as well as last year. Here the honey never comes in fast—between 3 and 4 pounds a day is the best I have noticed on the scales under my best colony; but our season is a long one, and I have never failed to get a surplus ranging from 30 to 200 pounds per colony.

Hall Co., Nebr., July 29. J. F. EGGERS.

The Novelty Pocket-Knife

A heavier and stronger knife than the one we offered heretofore.)

THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal with $3.00, and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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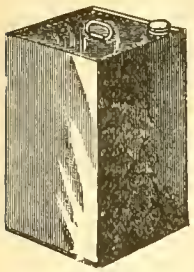

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We are prepared to furnish the best new Basswood Extracted Honey, in 60-pound tin cans, at these prices: Sample for 8 cents, to cover package and postage; one 60-pound can, at 8 cents a pound; two cans or more, 7¾ cents a pound—CASH WITH ORDER. Address,

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Smoke Engine (largest smoker made)	4-in. stove.	Doz.	$13.00; each, by mail,	$1.50
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Bingham Smokers have all the new improvements. Before buying a Smoker or Knife, look up its record and pedigree.

FIFTEEN YEARS FOR A DOLLAR; ONE-HALF CENT FOR A MONTH.

Dear Sir:—I have used the Conqueror 15 years. I was always pleased with its workings, but thinking I would need a new one this summer, I write for a circular. I do not think the 4-inch Smoke Engine too large.
January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in America. We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.

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NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Don't fail to mention the Bee Journal when writing advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Aug. 9.—At this date very little comb honey has come on the market of this season's yield, and none of it would grade more than No. 1; it has sold at 12@13 cents, not any dark or amber offered. Extracted sells readily at 7@8c for white; amber, 6½@7¼c; dark, 6@6½. Beeswax, 25@26c. R. A. BURNETT & Co.

KANSAS CITY, July 7.—A small shipment of new comb honey on the market is selling at 14@15c. Good demand. C. C. CLEMONS & Co.

NEW YORK, Aug. 9.—Old stock is entirely cleaned up, and good demand now for new crop. We quote: Fancy white, 13c; No. 1, 12c; fancy amber, 11c; No. 1, 10c. Extracted in good demand with market firm. Fancy Florida, 7½c; choice, 6½@7c; amber, 5¾@6c. Other Southern, 65@70c per gallon for choice, and 55@60c for common. No demand for buckwheat honey at this time. Beeswax dull at 25@26c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 2.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾, light amber, 6½@7c. Beeswax, 26½@27c.

A shipment of 124 cases extracted went forward by Panama steamer this week for New York. Market is decidedly firm for both comb and extracted, especially for best qualities. Stocks are small, both here and in the interior.

CLEVELAND, July 22.—Fancy white, 13@14c; No. 1 white, 12@13c; A No. 1 amber, 10@11c; No. 2 amber, 9@10c; buckwheat, 8c. Extracted, white, 7c; amber, 6c; buckwheat, 5c.
A. B. WILLIAMS & Co.

BOSTON, May 17.—Fancy white, 12½@13c; A No. 1, 11@12c; No. 1, 10c; light amber, 9c; buckwheat, 8c. Extracted Florida, white, 7½@8c; light amber, 6½@7c. Beeswax, 27@28c.

The demand for both comb and extracted honey has settled down to the usual small proportions of summer, and prices quoted would be shaded some, too, as stocks are a little heavier than is liked at this season of the year.
BLAKE, SCOTT & LEE.

BUFFALO, Aug. 4.—The honey season has opened in a moderate way, a few small lots of new arriving. Extra fancy 1-pound combs, 13@14c; fair to good, 11@12c; dark, poor, etc., 8@9c.
BATTERSON & Co.

OMAHA, July 18.—Altho first receipts of new crop Southern honey were recorded early in June, there has not been any regularity about them since. A straggling lot of comb turns up now and then, and, when quality is choice to fancy, is eagerly pickt up at 14@15c. A little lot of 1898 crop was received a few days ago and went at 13 cents, quality not above choice. For extracted there is not such an urgent demand, still, 7½@8c would be obtainable in a small way. The heavy buyers will hold back until later in the season, expecting to purchase on about the same basis of values as last year. Early shipments of all the comb that can be gotten out is certainly advisable; there will not be any chance of holding out with present quotations after the first demand is satisfied. PEYCKE BROS.

DETROIT, July 15.—No old honey to quote, and no new offered. Prices are liable to rule higher as crop is short. The abundance of rain will no doubt help the crop of fall honey. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

WANTED. Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

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Root's Goods at Root's Prices.

POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

Italian Queens.

4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

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Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

1899 Catalog ready Feb. 1. Copy of the AMERICAN BEE-KEEPER (20 pages) free. Address

The W. T. Falconer Mfg. Co.
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Champion Chaff-Hive
with fence and plain sections, and a full line of other
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A postal sent us with your name for a Catalog will meet with the greatest surprise. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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BEES **QUEENS**
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

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SELL ROOT'S GOODS AT ROOT'S PRICES. Shipping-Cases and Danz. Cartons are what you need to display and ship your honey in. Send for Catalog. BELL BRANCH, MICH.

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For the benefit of Teachers, Students, and others.

Six Weeks' Course for only $15.00. Send for Catalog.

Eclectic Shorthand College,
Headquarters of the Cross Eclectic System,
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I ARISE

To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

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22nd Year Dadant's Foundation. 22nd Year

Why does it sell so well?

Because it has always given better satisfaction than any other.

Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation:

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E. T. Abbott.....St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co.....Sheboygan, Wis.
Inter-State Mfg. Co.....Hudson, Wis.	Vickery Bros.....Evansville, Ind.
Reynolds Elevator Co.....Poughkeepsie, N. Y.	C. H. W. Weber.....Cincinnati, Ohio.

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BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times. CHAS. DADANT & SON,

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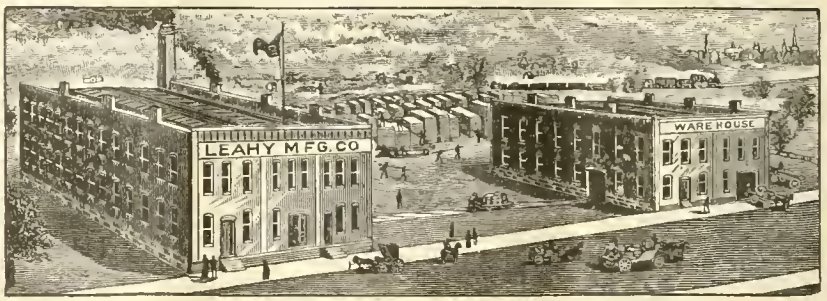

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Do you want nice, white Shipping-Cases, smooth and accurately made? We have them, and they cost no more than others charge for cases made from cull lumber. Ours are made in Wisconsin, from white basswood, and there are none nicer. 12 and 24 sections are the regular sizes, with 2 or 3 inch glass.

We want a quantity of

BEES

on Langstroth frames, preferred, from this vicinity.

Catalog of Apiarian Supplies, etc., free.

I. J. STRINGHAM, 105 Park Place, New York, N. Y.

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Honey Wanted Any Quantity

If you have honey to dispose of, write us, stating the kind, quality, quantity, how put up, and the price wanted. If extracted, kindly send small sample when you write.

Address, **GEORGE W. YORK & CO.,**
118 Michigan Street, CHICAGO, ILL.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., AUGUST 24, 1899. No. 34.

CONTRIBUTED ARTICLES

Wintering Bees in the Cellar.

BY C. DAVENPORT.

LAST winter I had a number of colonies starve to death in the cellar, and many others were nearly or entirely destitute of honey when the hives were put out. One colony in particular was, it appears, in the last stage of starvation. It was medium strong, but the bees were so weak that when the hive was put on its stand they made no effort to fly. On examination, I found there was not a drop of honey in the combs. When handling the frames on which the bees were clustered, they would merely raise and flutter their wings a little in fact they appeared and acted just like bees do when they are chilled. I put three or four frames of sealed honey in the hive, then sprinkled warm, thin sugar syrup over the bees, and in a short time they were lively, and appeared to be none the worse because the wolf of starvation had entered their door, and from appearances staid with them for some time.

Apiary of Jacob Huffman. *See page 532.*

Such a case had never before come under my observation. I supposed that when a colony starved to death they did so gradually, a few at a time, but in this case, at least, it appears they took means to distribute their stores and shared alike while they lasted, and all would have succumbed at once or within a very short time of each other.

When the hives were put into the cellar I thought that each colony had plenty of stores to last them until they were put out in the spring, and for some time after as all eight-frame hives weighed 50 pounds or more. I had taken special pains in the fall to feed, or furnish sealed combs, to colonies in light hives, but there was an excessive amount of very heavy pollen in nearly all the hives. We had a great drouth here last fall, and brood-rearing stopt earlier than I ever knew it to do before. It was probably on this account that three was so much more pollen in the combs than usual, for I did not notice, and do not think, that there was more gathered last season than there commonly is. Most, or a great deal, of it was in the bottom of the cells with honey on top, or I undoubtedly should have noticed in the case of many colonies that they were short of honey, and in looking back it appears very strange to me that I did not think about the matter, anyway; but my experience and loss may be the means of saving a loss to others under similar circumstances.

For the benefit of those without much experience, who winter their bees in the cellar, I am going to say a few words, and on account of the great severity of last winter, probably many will put bees into cellars next winter, who have been wintering them on the summer stands.

In my immediate vicinity not a single colony that was left out-doors last winter survived, but most of the bees around here that were wintered out-doors were kept by farmers, who, when they protected them at all, mostly did so by throwing straw or cornstalks over and around the hives; but it hardly seems possible to me that bees could have lived thru last winter out-doors, even if protected by the most approved method of packing, for aside from the extreme and long-continued cold-spells, there was not, from about the middle of November until the forepart of April, a really suitable day for them to fly.

The time to put bees into the cellar depends, of course, upon the locality. For the last few years I have left mine out until the latter part or November, but last fall about the 20th of that month there was a severe storm, with extreme cold; I think I lost, at a low estimate, $100, because my bees were out in it, and after this the majority of mine at least will be put under ground by the middle of November.

Some recommend placing long scantling, or 2x4, in the cellar to set the hives on. I used to practice this plan, but I have found that a much better way is to put an empty hive or stout box under each tier of hives. When this is done, only the colonies in that one tier are disturbed when a hive is put on or taken off. When long pieces are used, unless great care is taken, the bees in all the hives on them are more or less disturbed when a hive is set on, or removed in the spring.

For the past two winters I have left the bottom-boards on, and for reasons I will not here take space to explain, I consider it better to leave them on and raise the body of the

hive up so as to leave an open space all around under it. Before commencing to carry the hives in, I set empty hives about a foot apart in rows thru the cellar, and level them up sidewise, but raise one end so that it is about an inch higher than the other. I use a spirit-level for leveling these stands, for it is an important matter to have them about level, if the hives are to be tiered six or seven high, as mine are; for if they are not they may lean over so far that in a cellar that has no floor but the ground, one tier may topple over, and its fall throw other tiers over, like a set of nine-pins.

For carrying the hives from the yard to the cellar, I use a carrier that is made so that two hives, or even three, if they are not too heavy, can be carried at once by means of handles similar to those of a wheel-barrow, that project out at each end. It requires two men to carry them in this way, but if the hives are some distance from the cellar it is, I think, much better to use something of this kind instead of a wheel-barrow, as with a carrier the bees hardly seem to know that they are being moved.

On a cloudy day, with the temperature at 40 degrees or lower, I seldom find it necessary to close a hive-entrance. After a hive has been put on its stand in the cellar, I raise it from the bottom-board, which has been loosened a day or so before; a short piece about one-half an inch thick is put under at each corner, and from some pretty extensive experiments I have made in this line, I am convinced that a colony will winter fully as well with the hive raised half an inch from the bottom-board all around as it will if it is raised an inch, or as it will with the bottom-board left off entirely; in fact, many of my hives that have strips on the bottom-boards I only raise the thickness of a lath all around, and have decided that with me it is better than to have them raised higher. I try, tho, to keep the air in the cellar pure, and the rows of hives are far enough apart so that one can walk between them and remove the dead bees on the bottom-boards, if they accumulate so as to make it necessary.

I consider it better to give ventilation enough to keep the air pure, even if doing so does, to some extent, cause an uneven temperature. A few colonies in a cellar of considerable size will, in most cases, obtain plenty of air without any special means being taken to give ventilation, but in a cellar that is well filled up with bees, some means should be taken to admit fresh air at will.

Of the numerous methods I have tried for giving ventilation, I prefer a pipe or tube running from the cellar up thru the roof, independent of any other pipe or chimney, with a suitable hood over the top to prevent rain or snow from running down, and with a damper on the same principle as a damper in a stove-pipe, where it can be most easily reacht, so that it can be regulated as the weather demands.

Southern Minnesota.

A Switzerland Blind Bee-Keeper.

BY D. GRANT.

IN the Revue Internationale D'Apiculture is a long and most interesting description of an apiary in Switzerland, with photos of it and its surroundings. It is remarkable for two reasons, first that it is over 3,000 feet above sea-level, only a few hundred feet below the line of perpetual snow, and within 1½ miles of one of the large Alpine glaciers with a winter temperature of 50 to 60 degrees below freezing, and snow on the ground for eight months of the year; and, second, because the owner and manager is not only a cripple, but *absolutely blind*.

This bee-master (for such on further acquaintance he proves himself to be) has about 30 hives arranged in two tiers on the south side of a large shed. The other three sides are closed, and a door at each end leads into the back part of the shed, where spare hives and combs are stored, and where the operator stands to manipulate his bees. In winter the spaces between and around the hives are filled with dry moss, and large shutters close the open part of the shed.

He keeps a first-cross Carniolan-German bee, and has found that the first are very given to swarming, while the cross is nearly a non-swarmer. Italians he has found too vicious, and not well able to stand the severe winters. He uses a hive containing seven frames about 11 inches square comb measurement for the brood-nest, and shallower frames in the extracting-supers, of which he has as many as four on some hives in the photo. He knows when to expect a swarm by the different noises in the hive, and the piping of the queens. An old straw-skep inverted on a stake a few yards in front of the apiary forms a never-failing swarm-catcher. He is, however, but little troubled with swarms, having only had three last year from 25 colonies.

To distinguish the brood from the honey he touches the surface of the comb with a chip of wood, and can tell by the difference in the feel of the cappings how far the brood extends.

His plan for uniting colonies, judging the strength of a colony, introducing queens, etc., are all unique in their way, while his dodge for finding and killing an old or condemned queen is too good to pass over. He moves the hive, putting in its place the hive he wishes the bees to go to. This may contain a caged queen (for requeening) or a weak colony (as in uniting). He then draws out the back frame of the old hive, shaking the bees off, and places it in the new hive. Then he drops into its place a frame full of syrup in the combs. In a few minutes this is covered with bees. This he shakes into the new hive. He then takes out the next comb, shaking off all the bees. This also goes into the new hive. In a few minutes he drops his frame of syrup in, leaves it awhile, and when covered with bees shakes them into the new hive. He does this until he gets to the last frame. This one, he says, always has the queen on it, and he plunges it, bees, queen and all into hot water. The bees shaken into the new hive, being gorged with syrup, are always accepted without trouble.

This bee-keeper has neither veil, smoker nor brush, and uses his hands to remove the bees from the combs. He says, quite contentedly, that his bees know him, and would not sting him because he is blind. He has never heard anything read about bees, nearly all he says and does is from his own observations. He does everything in connection with his bees himself except foundation-making, at which his father helps him and extracting, his father's share of this work being the uncapping.—Australian Bee-Bulletin.

How I Started in Bee-Keeping.

BY J. F. SAUTTER.

IN July, 1897, father sent three of us boys to a neighbor's to pick cherries. The day was warm and bright. About three o'clock in the afternoon, while we were in the trees picking, we heard a strange sound or humming, and on looking out of the foliage we saw a swarm of bees flying up the ravine toward us. I do not think there were ever three boys that got down from the top of a cherry-tree quicker than we did.

Just as soon as we were on the ground, I gave the order to throw sand and gravel in the swarm, which was done with a will. The air was full of sand and gravel for a minute or two, when the swarm stopt and began to cluster on an elder-bush. Then a shout went up that would have surprised an Indian.

Now, what were we going to do with them? The nearest bee-keeper lived about one mile away, and after some arguing one of us volunteered to go after a hive, or see if we could get one. Luckily, the good neighbor had just one hive on hand yet—a box-hive, which he sold to us for 25 cents.

The next thing was to hive the bees. None of us were very brave with them yet, altho we had had plenty of fights with bumble-bees on our farm, and ruined many a straw-hat in the excitement. But these bees we did not understand so well. We had heard father tell how he hived a swarm for a neighbor once, so we started.

The swarm being clustered on an elder-bush, we were at a loss to know how to get them off; but this is the way we did it:

We set the box-hive up just about as close as we thought we were safe, then taking out our pocket-knives we whittled the elders off, and gently laid them down in front of the hive, when, to our delight, the bees began to march into the hive.

Now we had another question to argue—How were we to get them home? We had with us a strap long enough to tie around the hive, and by taking it and a pole we swung the hive between two of us boys, after closing the entrance with grass. Getting our strap and pole on, we started for home. We felt about as good as Joshua and Caleb must have felt when they were coming out of Canaan, only they had grapes, and we had bees and cherries.

Just as we appeared in the yard at home, father came in from the barn. I can yet see the puzzled look on his face. He did not know whether to scold or not for bringing the bees. He did not scold, tho, but told us where we might

set them, and after getting them on a stand, and the grass out of the entrance, we explained how we got them, altho we had some trouble in doing it, as we all wanted to talk at once.

After supper we talkt bees. It would have made a bee-keeper smile to hear us. It lasted until bedtime, and after we were in bed I discovered that I had caught the bee-fever, as I could not sleep, the bees being so much on my mind.

My two brothers did not take the fever, so I bought out their interests the next day, and then started to get more information on bee-keeping. I searcht the house for the back numbers of a farm journal which contained articles on bee-keeping. The first one I found was written by Dr. C. C. Miller, and then other articles by George Spitler. If every farmer would read the articles in the farm journals as I did, I am certain there would be more farmer bee-keepers that would make bees more of a success.

As my first swarm was cast in July, it did not have much honey for winter. I did not find anything in the farm papers about wintering or feeding for winter, so I askt the neighbor bee-keeper how to feed. He told me to make a syrup of sugar, and drop it down among the bees on the cluster, which I did when the days were warm enough for them to fly. They lived until the next spring, then cast a swarm, and gave some surplus honey.

In the winter I saw the advertisement of the American Bee Journal, sent for a sample copy, and mailed my subscription the next day after receiving it. I also got "A B C of Bee-Culture" and other books on bees, and all the while the bee-fever is getting more hopeless, as my study and experience advance. Stark Co., Ohio.

Secrets of Selling Honey in the Home Market.

BY H. D. BURRELL.

HOW to dispose of the honey crop profitably is becoming a serious problem with most bee-keepers. Not many years ago it was easy to produce comb honey, ship it to some commission house in a near-by city, and realize 16 to 20 cents a pound for it. Now in many places most of the honey-producing timber is gone, and waste lands reclaimed and cultivated. These causes, with frequent poor seasons, render the honey crop uncertain; and, worst of all, comb honey in the cities is quoted low.

Formerly I produced comb honey almost exclusively, and shipt nearly all of it to commission houses. But some years ago I unexpectedly had about a ton of autumn extracted honey to dispose of. Shipt to a commission house it would probably have netted 4 to 5 cents a pound, *some time*. I had never tried peddling honey, and was very much prejudiced against peddlers and peddling; but I wanted more for that honey. I loaded some of it into the wagon, put up in convenient packages for retailing, and started, tho with much trepidation. I knew a few rebuffs would send that honey to the city for what it would bring. But I sold honey at nearly every house, over 300 pounds the first day, and decided that peddling (honey at least) was not such bad business, after all. Many neighbors and acquaintances who had past by frequently for years and seen the sign, "Honey for Sale," but never bought a pound of my honey, bought freely when it was carried to them. And they didn't buy afterward, either, unless I carried it to them and askt them to buy.

The ton of honey was soon sold at 8 to 11 cents per pound, according to quantity wanted, and several thousand pounds more were bought and sold at a fair profit. Since that time I have produced mostly extracted honey, always retail it myself, and am getting the same prices now in these times of very low prices that I did ten years ago. Honey, if a good article, will sell itself almost anywhere, if given a fair chance. I have never found a place, in country or town, where it would not sell fairly well at any time of year, tho in the fall is the best time to sell, in my experience, after the bulk of fruit is gone, and the many needs of the winter season have not yet taxt the pocket-book.

But I think I hear some one say, "I can't peddle;" or "I won't stoop to peddling!" Now, neighbor, stop a minute, and listen. When I was young and green I tried "canvassing" for a book. For years after, I had a horror of peddling. When I came to keep bees, and have honey to sell, I would not even ask a merchant with whom I traded regularly, to buy my honey. If any one but a commission man wanted any of it, he had to ask for it. I am not a natural salesman, a poor talker—timid, diffident, and easily rebuft. I can, however, sell an average of 100 pounds of honey a day in any fairly good farming country, and in villages and towns often much more. You will find selling your own honey different from selling books or notions. People will be glad to see you come. You need not lose one atom of your dignity, if it is of the self-respecting kind. If any one thinks any less of you for selling honey, providing you are polite and respectful, it will be some one whose opinion is not worth minding. Any one with a little tact and energy can dispose of 3,000 to 5,000 pounds of good extracted honey at fair prices, at odd times in fall and winter, when time is not worth much, and much more can be sold by devoting more time to it.

Comb honey is not satisfactorily retailed, in my experience. It too easily gets to leaking, and is then mussy and not attractive. Sell comb honey only by the case, if at all. Perhaps I may be pardoned for saying, in such an article as this, that I have for many years kept from 50 to 195 colonies of bees, and have produced and sold over 60,000 pounds of honey, and bought and sold much besides. I write facts learned in the dear but thoro school of experience, and not plausible theories.

First, secure a good article of well-ripened extracted honey, and so care for it that it will remain good. My ways of doing this differ from the usual ones; but I will not take time now to explain.

When we are ready to sell, if the weather is mild, attach a sliding faucet to a five-gallon screw-cap tin can of honey; place the can on the wagon-seat, the dish to be filled on platform scales underneath, and weigh out any quantity wanted. It is usually most satisfactory at this time of year to let the purchaser furnish the dish, then there is no package to pay for or return.

Some writers have advocated selling not less than one dollar's worth when selling honey direct to consumers. I can't agree with them. A small sale often paves the way to a large one later, and it always pays to be accommodating and obliging; but I charge one cent per pound more for less than a dollar's worth.

In cold weather, when honey will not run readily, I put up honey in one, two, and four quart tin pails, and charge extra for the pails. Always, to every package sold, attach a neatly-printed label, giving your name and address, and plain, simple directions for so caring for the honey, that it may retain its good qualities until used. Dress neatly but plainly, like a farmer, not like a city man. Have everything neat, clean, and attractive.

Now we are ready, how shall we find buyers? Fill a small new tin-pail with honey, and label it. Call at every house—skip none. You will often make sales where you least expect it. When the door is opened say, "I have some choice honey, please get a spoon and sample it." Right here is the main point. Get every one, if possible, to taste your honey. Most people have sweet teeth, and a taste of good honey puts them in good humor. Be very sure that the children, if present, have a taste, too. If you don't know already that parents' hearts are very easily reacht thru their children, you will soon learn it. If a servant or child goes to consult the housekeeper about buying honey, see that the honey-pail and spoon go, too. Twenty-four people out of 25 would say, "No!" if askt if they wanted to buy extracted honey. If they taste first, many will buy. Many are prejudiced against extracted honey. Perhaps some time they have had a poor article of extracted or strained honey, or, may be, they think the honey is bogus. I have many times had such people taste my honey and say in a surprised way, "Why, that is good. That is genuine honey. What is the price?"

One lady said to me last fall, "I never buy extracted honey. I buy comb, then I know what I am getting." After she had been induced to sample the honey she found it good, knew it was genuine, bought some, and askt me to call again.

Don't annoy people by urging them to buy when they don't want to, and be invariably polite and pleasant whether they buy or not. You can easily make friends who will be glad to see you come again. Follow the same route every year, and your sales will increase each trip. You can go over the same ground as often as once in six weeks to advantage. I have many customers who at first bought lightly, or not at all, who now buy 20 to 50 pounds of my honey every season. One near-by town of about 2,000 population has used over 1,500 pounds of my honey up to Feb. 1, and all autumn honey, too. I seldom have any other kind in my present location. But there is little buckwheat, and the honey is mostly from golden-rod, fireweed, and Spanish-needle. One pleased customer will often find others for you. In this way in one season I sent three 5-gallon cans of honey to customers in Chicago, at 9 cents per

pound net. "Can't buy genuine honey in Chicago!" they say. A little ridiculous, isn't it?

Some one will ask if I have no competition in selling honey. Yes, but that doesn't matter much. There is plenty of room, and customers for all. Make a reputation for square dealing and selling a good article, and customers will wait for you. If some one undersells you, and gets some of your customers, never mind—there is a very large market almost entirely undevelopt.

Think of this matter, brother bee-keepers. Plan to produce a crop of good extracted honey next season, and then get all there is in it. Don't divide with transportation companies or middlemen. A crop of extracted honey is much surer than a crop of comb, and, in most localities, two or three times as great. Ask a fair price for your honey (all you can get is a fair price), and adhere to it. It is much easier to lower prices in a good year than to raise them in a poor one. If there is a large or small crop of grain or fruit, every one knows it. Not so with honey.—Gleanings in Bee-Culture. Van Buren Co., Mich.

Jacob Huffman's Barn, built with one season's Honey Proceeds.

Poor Apiarian Conditions in a Vermont County.

BY G. W. FASSETT.

EDITOR YORK:—I send you a clipping from our local paper for Aug. 4, which reads as follows:

NO HONEY THIS SEASON.

The long drouth in June had an indirect result on one Addison county industry not noted at the time—honey-producing. G. W. Fassett, of this place, who owns 100 colonies of bees, informs us that he will secure only about 500 pounds of honey this year. He notes the fact that L. O. Thompson, who last year secured 13 tons, will have none this season, and J. E. Crane, who marketed 14 tons in 1898, will get about 500 pounds this year. The two latter gentlemen will have to feed their bees until next spring, and this will require about eight tons of sugar each. This season has been the worst Mr. Fassett has ever known, and he has been a bee-keeper since his youth. The five largest bee-keepers in Addison County are J. E. Crane, L. O. Thompson, V. V. Blackmer, R. H. Holmes, and W. G. Larrabee. Together they own about 2,000 colonies of bees, or one-third of all owned in the county. Last season over 100 tons of honey were shipt out of Addison County; this year there is not enough for home demand. In some parts of the county owners for several weeks have been feeding their bees to keep them from starving. Reports of actual starvation have been received. It is a notable fact that the worst season for maple sugar Vermont has experienced in many years should be coincident with a like failure in honey-producing.

In addition to the above I would say that our county is small, and contains quite a variety of soil and climate for so small a territory. The western part lies on Lake Champlain, and extends east over the range of Green Mountains. The loss in bees last winter in the mountain towns was over 50 percent, and in the towns not over 10 or 15 percent. The early spring promist fair; bees filled their hives with both honey and brood; clover lookt as fine as I ever saw, but it came on dry, and the clover did not yield honey enough to keep the bees from starving; only a few bee-keepers put on any sections. One of the largest bee-keepers said he put on a few supers to see if the bees would draw out the foundation. He said they did, *i. e.*, they drew most of it out of the sections.

When the clover failed then all the bee-folks lookt forward to the basswood bloom for their surplus honey. (We get very little fall honey.) Basswood blossomed full, all the little trees were full of blossoms, and I am at a loss to know what kind of weather it needs to make basswood yield nectar. We have a long spell of basswood bloom from the lowland to the height of the mountains where the basswood grows, and we had all kinds of weather. There came plenty of rain, but no honey; then cool weather followed by more hot and dry weather, but no honey in the basswood, which means a good many dead colonies before next spring. And not only that, but there will be a good many tons of sugar fed to keep bees from starving.

It has been a hard season for those that make a practice of requeening their bees; they have had to feed to get the bees to build queen-cells, and have also had to feed to get the bees to rear drones.

BEES STARVED FOR WANT OF POLLEN.

I see on page 450, Prof. Cook speaks of some finding dead brood in hives with plenty of stores. We find it in hives with plenty of honey, but fail to find pollen in the hive, and I think it is starved brood, the same as when there is no honey. Addison Co., Vt., Aug. 8.

Mr. Jacob Huffman and Apiary.

Wisconsin is one of the great honey-producing States of our country. A few weeks ago we gave a picture of Miss Pickard's apiary, and this week another. Mr. Huffman has this to say about it and his work with the bees:

The view of the bee-yard shown here was taken without any preparation whatever, shortly after taking the bees from their winter quarters. I would have been glad if the view could have been taken a month later in the season, if to be placed in the American Bee Journal.

I have been in the bee-business about 23 years, beginning upon a small scale, and I consider myself as yet an amateur. I have had successes and also some small failures. There have been years that I have realized more clear profit from my bees than off the farm. Those who have followed bee-keeping understand that we have occasionally dry seasons, and sometimes those too wet to realize a profit. Only one season in my experience was feeding for winter found necessary.

The illustration of the barn will give an idea of my profit for the year 1885.

In my immediate locality the honey season is much shorter than it was a few years ago. Basswood, which is one of the best honey-producers, has been cut off, as the timber is being cleared away, and farms are everywhere instead. It has become necessary for bee-keepers to be ready for the honey season if they expect any surplus as a recompense for their labor. The prospect for this year is not so flattering, but considering the hard winter we past thru, I am very thankful for present prospects.

Green Co., Wis. JACOB HUFFMAN.

In further explanation we might add that the year Mr. Huffman's honey crop paid for his nice barn, 36x40 feet, he had 140 colonies, which produced 14,000 pounds of extracted and 6,000 pounds of comb honey, which sold for $1,280.

In the first picture Mr. Huffman is shown operating a McCartney section-press and foundation-fastener. The building at the left is an old house used as a shop, and the one near the left is an extracting-house located in the center of the apiary.

We had the pleasure of meeting Mr. Huffman at an

annual convention of the Wisconsin State Bee-Keepers' Association held in Madison several years ago. He undoubtedly is a bee-keeper who thoroly understands the business, and a splendid talker at a convention.

Dr. Lortet's Paper on Foul Brood.

WE have much pleasure in giving our readers a translation from the Revue Internationale of a paper by Dr. Lortet, who has for some time been making experiments and observations upon this disease. There are many points quite new, and which throw considerable light upon the subject, and the remedy proposed is simple, and, from reports, encouragingly effectual. We wish our readers to particularly note that the naphthol is that known as naphthol beta, and not the ordinary naphthaline. As it is perfectly harmless, there is no danger in its application:

"Thanks to the publicity you were good enough to accord me in the columns of La Revue, I have received from a number of your readers pieces of foul brood comb, or bees exhibiting more or less advanced stages of the disease. I have, therefore, during the last year been abundantly supplied with material for my researches, and have been enabled to clear up a good many obscure points in connection with their virulent affection, and to formulate a course of treatment based on careful laboratory experiments.

"As was demonstrated in the contributions by Mr. Cheshire (Revue, August, 1884) and Dr. Klamann (Revue, January, 1889), foul brood is in reality produced by rod-shaped bacteria which develop rapidly in the brood-cells and soon die, and produce in putrefying an odor which is altogether unmistakable.

"Before beginning my observation of foul-brood larvæ, either during the disease or after death, and of adult insects already infected, I turned my attention to perfectly healthy bees, as well as various other species of hymenopteræ, such as wasps, humble-bees, carpenter-bees, etc. After a patient and minute course of dissection I have arrived at the following results, which are based on an intimate acquaintance with the ætiology of the disease:

"I.—I find that various hymenopteræ, besides adult bees, whether healthy or diseased, *invariably present*, thru the whole of the lower part of the digestive tube, a very large number of bacilliform bacteria, which are probably called upon to perform important, tho at present unknown, functions in connection with the chemical changes which take place in the food introduced into the digestive canal.

"In the bee, to mention only the species which immediately interest us, whether healthy or diseased, as well as in the digestive canal of the brood, whether in health, in disease, or after death, I have invariably discovered two normal bacilli, the presence of which has, without doubt, led some people astray.

"The more numerous of these bacteria are of a large rod-like shape, broad, thick, short, and bear a striking resemblance to certain bacteria which are frequently met with in soft water. They are never arranged in chains, but propagate themselves by means of binary fission; in the early stages they are often united in couples. When fully developt they become slightly rounded at the extremities, which swell perceptibly. These bacteria retain very well the stain communicated by Fuchsin, and after staining the club-shaped ends show a much darker tint than the central space of the body. In this state the bacteria present the same appearance as may be observed in the bacteria of malignant œdema.

"This species is most easily cultivated, especially in liquid media, less easily in nutrient Agar-Agar glycerine gelatine. When injected into the cellular tissue of guinea-pigs it fails to produce any harmful effect.

"II.—Another normal bacterium is also inably found in the digestive canal of the bee. It is smaller, thinner, and short, its length being only equal to twice its breadth; it is not rounded at the extremities, which are shaped almost at right angles. These bacilli do not form chains, but frequently remain united in pairs for a long time. In this state they nearly resemble diplococci, tho perceptibly more elongated than these latter. In cultivation they often group themselves into *zoogl*œ*a*, and in this case arrange themselves very regularly. These microbes multiply without difficulty in both solid and liquid media, and take a strong stain from Fuchsin, or Methyl, or Gentian violets.

"III.—Lastly, in the digestive canal of dead or diseased brood, as well as of adult bees already infected with the disease, but in the digestive canal alone, a third kind of bacterium is found, which is without doubt one of the forms that have been examined by Mr. Cheshire. It is thin, and frequently extends in filaments. It thrives well in sterilized veal-broth, and it is therefore comparatively easy to obtain a supply of perfectly pure specimens for purposes of inoculation. In this nutritive element filaments appear in a few days, and after staining the fine granular elements of the formation become apparent owing to the differences in coloration.

"In the digestive canal of the adult the bacteria appear to maintain their rod-like shape for a considerable period—perhaps, indeed, always; whereas in the digestive canal of the larvæ, probably owing to the influence of albumenoids, which pass by osmosis thru the walls of this tube, the bacteria, as in the case of cultivations effected in unsalted veal-broth, are rapidly transformed into very fine, virulent granulations, which invade all the tissues, and soon bring about the disorganization and rapid putrefaction of the larvæ.

"The adult bee, on the other hand, even when the foul-brood bacteria have taken possession of its digestive canal, seems to be able to live for a certain time. It is, however, none the less apparent, once the infection has taken firm hold, that the animal is diseased. The digestive canal, and especially the surrounding glands, end by being invaded by an enormous number of the rod-shaped organisms; the insect loses its vivacity, grows languid, and finally perishes after a more or less protracted interval.

"Virulent granulations cultivated in salt veal-broth, or on plates of glycerated Agar-Agar, produce bacillary bacteria, which, when given in food to the larvæ, undergo in their turn segmentation into virulent granulations, whereas in the case of the adult bees, they still probably retain the bacillar form for a long time, tho they do not fail in the end to cause its death.

"The culture and transformations of the foul-brood bacterium cannot take place in the honey; so much is certain. Still, I may mention that in diseased hives the honey and wax are always more or less infected on the surface by bacilli, virulent granulations, excrements, etc.

"I have on several occasions succeeded in reproducing the whole series of phenomena mentioned above experimentally, and have, without difficulty, infected insects which had been perfectly healthy and vigorous up to the moment of the experiment. My mind is, therefore, quite free from doubt in the matter. It is the adult bee which is first infected in its digestive canal by a foul-brood bacterium obtained from some unknown source. In feeding the larva it infects in its turn the digestive tube of this latter, and here, owing to the action of the albumenoids, the bacillar bacteria are transformed into virulent granulations, which invade the tissues and finally bring about the death of the insect.

"Contaminated honey may be a cause of the propagation of foul brood in the sense that, being polluted by foul-brood bacteria or by virulent granulations, the healthy adult bee which allows this substance to enter its digestive canal is rapidly attackt by the disease, and will even itself soon communicate the infection to the brood. Experiment in such cases gives the most convincing results. Still, in the case of foul brood, as in the case of virulent affections which attack vertebrate animals, certain individuals seem to enjoy exceptional immunity, and resist the infection. Is this due to previous inoculations, or to some individual predisposition? This is a point which I am not at present prepared to decide.

"I had only once an opportunity of examining the queen of a hive infected with foul brood, the property of M. Matthey, of Bassins. The eggs of this insect were healthy, and contained neither bacilli nor virulent granulations. The queen herself was perfectly healthy, a point which I was able to place beyond a doubt by means of a careful post-mortem. I hesitate to draw any conclusion from this isolated instance, tho I confess that, judging from the course the disease takes, I do not believe that, as a rule, the malady can be propagated by the rearing of larvæ produced from infected eggs.

"In my opinion, therefore, it is always the digestive canal of the nurse-bee which is infected, and it is always by the act of feeding that the adult bee infects the digestive canal of the larvæ, the death of which latter is the speedy result of such inoculation.

"Therefore, a knowledge of the above facts leads me to the following conclusions:

"1. The bacteria of the third form described, as already

shown by Mr. Cheshire, are in effect the true cause of foul brood. They are the active agents of contagion and of the propagation of the disease. Numerous laboratory experiments, too long to be described here, prove this beyond the shadow of a doubt.

"2. Seeing that the foul-brood bacteria must necessarily kill all brood the digestive canal of which is inoculated by the act of feeding, it appears to be absolutely useless to endeavor to cure these larvæ, as all their tissues are rapidly invaded by the virulent granulations into which these bacteria resolve themselves. (I employ the word granulations purposely in preference to the term *spores*, which is used by several writers. I cannot bring myself to believe that true sporulation, similar to that observed under certain conditions in bacteria of anthrax, and in that of blood from spleen, really takes place in foul brood.)

"3. Adult bees, whose digestive canal is infected by the foul-brood bacteria, may frequently survive for a considerable period. Some even, owing to special circumstances, seem to resist the virulent stage of the malady. We must, therefore, direct our efforts to the digestive canal of the worker-bees, the feeders of the queen, if we desire to attack at its source the evil which may spread with lightning rapidity among the rising generation of larvæ, which is the sole hope of the colony.

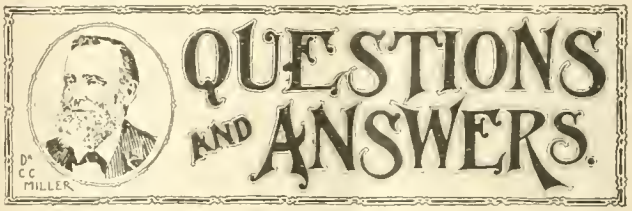
"IV.—The treatment, then, ought to be internal and as energetic as our little patients are willing to allow. External treatment, by means of fumigations or sprayings of any kind, are (I do not for one moment deny) also helpful, since these methods contribute largely to the disinfection of the hives, combs, and tissues of the bees, etc. It is even possible, under certain circumstacnes, to succeed in diminishing the virulence possest by the bodies of the larvæ after death during the process of desiccation. But I must repeat that such external treatment can only be useful as an auxiliary, and I greatly question whether it has ever been successful in curing of itself a colony attackt by a well-authenticated case of foul brood.

"The foul brood bacterium seems to be very fastidious with regard to the conditions of its existence. The media in which it can be developt are rendered sterile by the introduction of infinitesimal quantities of well known antiseptic substances. We are, therefore, justified in supposing that these same substances, if the bees can be made to absorb them, will prevent the invasion of the digestive canal and the surrounding parts by the bacillar bacteria, will destroy those that may have already lodged there, and will thus prevent the infection from spreading to the brood in the act of feeding.

"The space at my disposal is too limited to permit of a detailed description of the numerous experiments which led me to fix on an antiseptic of the first rank, introduced some years back as a valuable antiseptic remedy in the case of intestinal derangements in man. This substance is naphthol beta, which owes its introduction into general practice to the valuable researches of M. Bouchard, Professor to the Faculty of Medicine of Paris. This excellent antiseptic cannot injure the bees, and they take to it the more readily as it is not very soluble, and therefore is not easily absorbed by the intestinal walls. Notwithstanding this, even when administered in minute quantities—*e. g.*, in doses of 0.33 grammes to 1,000 of liquid, it effectually prevents all fermentation, decomposition, or other changes caused by the micro-organisms. The media most favorable for the development of foul-brood bacteria are rendered perfectly sterile when treated with a proportional quantity of naphthol.

"Lastly, thanks to experiments made with some full colonies partly attackt by the malady, which have been kindly forwarded to me by some of my correspondents, I have ascertained that a syrup medicated by a dose of naphthol in the proportions mentioned above is amply sufficient to rid foul-broody bees from the parasites contained in the digestive canal. In cases where the infection has not laid too strong a hold of the parts surrounding the intestine, the cure seems to be speedy and complete. Even in captivity and under very adverse sanitary conditions, the insects soon regain all their old activity and liveliness. The treatment which I venture to recommend to the serious attention of apiculturists is as simple and rational as possible:

"In the early spring, before eggs are laid, administer to the diseased colonies as large quantities as possible of sugar syrup containing 0.33 of a gramme of naphthol beta. The naphthol should be first dissolved in one litre of pure water, with one gramme of alcohol added to facilitate its solution. The liquid thus obtained is employed in making the syrup in the usual manner. I am quite certain that with this dose the bees will readily take to the syrup, which is in itself a powerful antiseptic. I need scarcely add that first-rate hygienic conditions are also necessary if we desire to give the bees the vitality and recuperative power which play so important a part in enabling living organisms to resist the inroads of virulent microbes."—Dr. Lortet, in the Bee-Keepers' Record.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—Editor.]

Cleaning Drone-Brood Out of Combs.

A postal card from M. D. Andes, of Tennessee, gives a better way of cleaning out drone-brood than to have the bees do it. I wonder I did not think of it when replying, for I had tried it years ago and found it successful. Mr. Andes says:

Dear Doctor:—I have just read the question of Nebraska and your answer, on page 455. I had a colony this summer in the same fix as his. After shaking the bees off in front of another hive, I set the frames up by the side of the fence where I had about 100 young chickens, and in less time than it takes to tell it the drones and larvæ were gone, and combs clean. Just try it, some time. M. D. Andes.

Purity of Stock.

If an Italian or albino queen gives you from 3 to 5 banded workers and black drones, would you consider such queens pure and all right? And in case you had young queens mated with such drones, wouldn't your bees be hybrids? Wouldn't such drones give you bees that were not pure? I am a queen-breeder myself, and claim that if the drones are black the queens are not pure. This is what I do: I sell all queens tested, and if the drones are black then I replace the queens. But you see, if my queens' mother is all right then I know I am right. I don't like Italian queens that give me black drones, or albinos, either.

Albino.

Answer.—If the drones are black, I should not consider pure the mother from which they came. Not only that, but I should not consider that the mother of such queen was pure and purely mated.

Queen Superseded by a Virgin.

Will a virgin queen introduced in a hive containing a laying queen ever supersede the laying queen? Last spring, while looking over my hives, I found one containing queen-cells. As it was too early for them to swarm, I decided that they were superseding their queen. I closed the hive and in due time I examined them again and found no brood or eggs, so I gave them a frame of eggs and larvæ. A few days later I examined the frame I had given them, and found queen-cells.

About the time the young queen should have been laying I introduced a queen that had just emerged from a cell to supply them with a queen in case theirs had been lost on her wedding-flight. The next time I lookt into the hive I think was about a week later. I found unsealed larvæ but no eggs; also a young queen showing the marks of fertilization the day before. I watcht her carefully, and in due time she began to lay. Wisconsin.

Answer.—Yes, bees will do almost all sorts of things about accepting or rejecting queens. I do not know that I ever heard of a committee of five workers entering an adjoining colony and taking home its queen, but almost anything short of that I should be willing to believe. Answer-

ing your question specifically, it would be nothing strange for an introduced virgin to supersede the laying queen under some circumstances. A virgin just out of the cell will be tolerated almost anywhere and at almost any time, but as she grows older she will in most cases be destroyed. If the old queen, however, is failing, or if it is about the close of the honey harvest, the younger may take possession. But in the spring-time, when there is in the hive a young and vigorous queen, you may count on the introduced virgin being destroyed 99 times out of 100. Yours was the 100th time.

Cyprian Bees.

1. Believing you have read the description of Cyprian bees in Bulletin No. 1, "The Honey Bee," by Frank Benton, I want to ask: Are they in *every respect* what Mr. Benton describes them to be? Is it a true and honest description of the Cyprian bee?

2. Can you tell where one may get queens of that stock of bees in their purity, unmixt with other bees? TEX.

ANSWERS.—1. Perhaps few are so competent to describe the different varieties of bees as Mr. Benton, and I know of no reason why he should want to misrepresent.

2. I don't know of any place where you can get pure Cyprians in this country. Whatever their virtues, they do not sufficiently overbalance their faults so that bee-keepers have wanted them. If they were better than other bees, you may be pretty sure the demand for them would secure a supply, and there would be plenty advertising pure Cyprians for sale.

Bees in Observatory Hive—Queens of United Swarms.

1. I desire to place a frame of bees and queen in an observatory hive for about 6 or 7 days. I shall take this frame, etc., from a full colony. Will it be necessary to cage the queen when I put her back into her own hive? or how shall I manage without risk of losing her?

2. I united a small after-swarm with a fairly strong nucleus, putting the former into the hive occupied by the latter. On examining the combined colony subsequently I found one of the queens balled and nearly dead. Which queen would be most likely to be killed under the conditions? IOWA.

ANSWERS.—1. The probability is that she would be received all right back again, but if she is a valuable queen it might be well to cage her by way of precaution.

2. If the nucleus and the after-swarm were about equal in strength, the advantage would be on the side of the nucleus, because they were in their own home and the others were interlopers. More strongly still would the advantage be on the side of the nucleus if it had a laying queen, for the queen of an after-swarm is not a laying queen, and other things being equal the bees would prefer the laying queen.

Getting Rid of a Cross Colony, Etc.

1. May I object to your advice in a late number of the American Bee Journal, to leave bees in a hive where the combs are built criss-cross to the frames? I have just such a colony, *very* strong, and *very* cross. I dare not put my hand down to adjust the entrance-blocks, or blow smoke on them, unless protected by canvas gloves. Now, I want that queen *out*, but as I can't get the frames out to find and clip her, I *don't* want them to swarm, as there are tall maple and locust trees all around. A man might climb for a swarm, but I lost one last year with a Doolittle queen—a very large swarm—and I don't want to lose this. I have transferred several (four) colonies, but this one is too cross.

2. Would it do to put a hive with empty combs or frames of foundation and move that colony away, then in a few hours, when aware of their queenless state, give Doolittle cells, or simply a frame of brood from my breeding queen? Then 21 days later move again, treating the flight-bees the same—empty combs and brood on the old stand. That would weaken it so that I could undertake to transfer, or I might give the transferred combs the last time.

By fall I would have three good colonies. I have already one from moving it, that is getting strong, but no surplus honey. In the spring the old colony will be changed by the new queen, and everything will be lovely, I hope.

3. This is the third year I have lived in hopes of a surplus honey crop, but next spring, I will have them (the bees) all on Langstroth frames. I should be successful, for the men around here that put on 80 1-pound boxes in the spring, hive swarms, and take off boxes in November, more or less filled, get from 80 pounds to nothing; but there must be good forage or some would not store so well. Theoretically, I know more than they do, but practically I get no honey, and the only way I get any profit is by rearing a few queens that do wonders for others. They generally come to me to solve the "mysteries," and tell me later I was right—"that's just what they did;" but I want some honey. We used in our family of five, three 60-pound cans last winter, and wanted more.

I hope you will have a successful honey-flow, and build up your colonies to replace the loss you suffered last winter. (MRS.) PENNSYLVANIA.

ANSWERS.—1. Yes, decidedly you may object to the plan of leaving that colony of yours to swarm, altho the rule in general is a good one. But where it is too difficult to secure swarms it should not be followed, nor with stock so objectionable on the score of temper.

2. You are on the right track as to your plan of proceeding, with some variation. When you move away old cross-patch, don't wait a few hours before giving a frame of brood, for with nothing but empty combs or foundation the bees that go back to the old place *may* desert. When you set the hive in place of the one removed, have in it from the start a frame of brood, and it wouldn't be a bad thing to have a few young bees with it, for all the bees that come from the cross colony will be field-bees, unless you make the removal at a time of day when young bees from the old hive are out at play. Neither would a queen-cell be likely to be destroyed if given from the start. It isn't necessary to wait three weeks before making a second removal. Two weeks will do, and 10 days will give quite a supply of bees if the colony is strong; but of course you will have more bees by waiting three weeks. You say, "In the spring the old colony will be changed by the new queen," which sounds just a little as if you expect the bees themselves to change the queen by rearing a new one. If the queen is an old one, she is likely to be superseded this fall (less likely in the spring), but even if a daughter replaces the old queen, she is likely to inherit some of her mother's traits. It is just possible that if you interview the old colony about two days after moving it to a new location, you may not find it so very difficult to handle. The reduction in numbers, none but young bees being left, and the fact that no honey is being brought in, may have a taming effect on the colony that will make them like another colony.

3. There must be some reason why you don't get as much honey as some of the other bee-keepers that do nothing with their bees, while you manage yours with more intelligence. Isn't it possible that the explanation lies in the fact that they *don't* meddle with their colonies, and so they are allowed to be very strong, while you weaken yours by drawing from them? Possibly that isn't the reason: I only throw out the hint.

A private word in your letter makes me say not to worry that no acknowledgment was made for former replies. Altho it is pleasant to know that my answers are appreciated, yet that's what I'm here for, and one of the best ways to show that your questions are satisfactorily answered is to send on more.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,

15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. AUGUST 24, 1899. NO. 34.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: —Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Paper on Foul Brood, by Dr. Lortet, in this number, will be read with interest by those who desire to be fully informed with regard to foul brood, and especially by those who are in sympathy with the views held across the water. Authorities on this side do not take kindly to any drug treatment of the disease, but when such men as Mr. Thos. Wm. Cowan and M. Ed. Bertrand, the able editor of Revue Internationale, have faith in anything of the kind, it is at least worth while to know something about it. The paper in question was translated some time ago into English from the French, and is considered of so much importance that it was republisht in the Bee-Keepers' Record.

A Certain Question-Box seems to have caused a little uneasiness in the editorial sanctum of the Canadian Bee Journal, if we may judge from this paragraph which appeared in the August number of our contemporary across the border:

A bee-journal with a question-box has above the department the following: "In the multitude of counsellors there is safety.—Prov. xi: 14."

We have every respect for a question drawer and the answers to the questions, but as we have seen some of these departments conducted with such diversity of views and opinions, diametrically opposed to one another, it is a pretty difficult matter for a beginner to know what to pick out as best. The "safety" must consist in the fact that a great many have opinions diametrically opposed to one another, and that the safety lies in accepting none of them with great certainty.

Of course, the criticism applies to the department in this journal, as no other bee-paper to-day, so far as we know, contains such a feature. As the experiences of those answering questions are varied, it must necessarily follow that their opinions based upon such experience would not agree exactly. Still, that does not prove that their disagreeing answers are worthless or unsafe to follow. One bee-keeper wouldn't use a bee-escape to remove honey; another wouldn't do without the bee-escape. Does that prove that the bee-escape is worthless? Other illustrations might be given, but it is hardly worth while. "In the multitude of counsellors there is safety."

Growing Basswood from Seed.—Mr. A. I. Root is much interested in this matter, and has found that it is a hard matter to get the seeds to grow. Chas. Blackburn reports in Gleanings in Bee-Culture that in the fall of 1893 he planted seed in a pan. The next spring not one had sprouted, but in the spring of 1895 they began to sprout. In the spring of 1896, 40 or 50 came up; in the spring of 1897 they came up very thick; in 1898 a few more came up, and they were still coming up last spring. Mr. Root suggests hurrying their growth by cracking the seeds, dipping them in boiling water, or something of the sort.

Light-Weight Sections.—The editor of Gleanings in Bee-Culture seems to make a point in favor of selling sections by the piece, by saying that in good years it is going to be difficult to raise the price of honey if we sell by the pound, but less so if we sell by the piece. One can hardly see why there should be any reason for this, but the editor may be entirely right when he says:

"But the more honey is sold by the piece (and the practice is growing everywhere) there will be less and less deception; and the consumer will come to forget all about pound weights, and will simply ask how much that honey is per box or section—not how much it is by the pound."

Reports of Bee-Conventions.—The Canadian Bee Journal very properly objects to the way in which so many reports of bee-conventions are made, in which is given perhaps the names of those present and the officers, that a profitable discussion took place upon a certain subject, but the profitable part, the discussion, is entirely left out. The Canadian Bee Journal is to be commended for giving a very full report of the discussions of the prominent bee-conventions in Canada.

Great Value of Sweet Clover.—The often maligned yet immensely valuable sweet clover is slowly but surely winning its way into favor. The Orange Judd Farmer—one of the most influential farm papers in this country—speaks thus of sweet clover:

IS SWEET CLOVER VALUABLE?

To answer this question something must be known of the character of the plant. It grows spontaneously along trampt roadsides, even in the wheel-ruts in abandoned roadways, and in trampt or sodden land anywhere. When found in meadow-lands it appears not to occur except when the ground has been trampt by stock when wet. It grows by preference in old brick-yards. It may be grown in fields by proper tillage. Viewing it in no other light we thus see that sweet clover grows luxuriantly in places where few or no other plants flourish.

But it belongs to the great class of leguminous plants, which are capable, by the aid of other organisms, of fixing atmospheric nitrogen and storing it in the plant tissues (Ohio experiment station). It belongs with the clovers, and it may thus be used to improve the land upon which it grows, and this appears to be its mission. It occupies lands that have become unfitted for good growth of other

forage-plants. Its rank then is as a useful plant, capable of increasing fertility of land.

How shall sweet clover be treated? The plant is the farmer's friend, to be utilized and not to be outlawed. The plant grows and spreads rapidly. So do red clover, white clover, timothy, blue-grass and other forage-plants, but sweet clover grows where they do not. Its presence indicates lack of condition for the others. Viewed in this way it is to be treated as preparing unfitted lands for other crops. It may be mowed a short time before coming into bloom and cured for hay. Stock will thrive upon it if confined until accustomed to it. The roadsides, if taken when free from dust, may be made almost as profitable as any other area in clover by cutting the sweet clover and curing for hay. If this is regularly attended to while stock is kept from other lands that it invades, sweet clover will be found doing always the good work for which it is adapted.

We welcome the aid of the farm papers in the effort to acquaint the agricultural public with the many values of sweet clover. Some have been foolish enough to call it a "weed." Pretty good sort of weed, isn't it?

In many localities this year no honey at all would be harvested were it not for the sweet clover. It is not only the bee-keepers' chief dependence, but the farmer's ever-present and reliable friend. It will pay to cultivate its acquaintance, as well as the plant itself.

Serenading Swarms with Tin Pans.—A correspondent says that the old custom of serenading swarms with tin pans originated from an old act of the English Parliament, giving a person a right to follow his swarm provided he rang a bell, or drummed on a tin pan, to give notice that he (the owner) was after the bees. This old act was past something like a thousand years ago, and during the centuries since it is evident that the original purpose of the drumming was lost sight of, and that subsequent generations came to the conclusion that the serenading induced a sort of spell on the bees, causing them to cluster so they could be captured.—Glesnings in Bee-Culture.

The Philadelphia Convention, to be held Sept. 5, 6 and 7, in Franklin Institute, 15 South 7th Street, between Market and Chestnut Sts., promises to be the best ever held by the United States Bee-Keepers' Association, if we may judge by the excellent program arranged for the occasion. Also in view of the low railroad rates guaranteed to every one going to Philadelphia, Sept. 1 to 4 inclusive, there should be a very large attendance. The editor of the American Bee Journal and Dr. C. C. Miller, with other bee-keepers, will go over the Pennsylvania Lines, beautiful illustrations of whose entrancing scenery and elegantly equipt coaches we had the pleasure of showing on our first page last week. Without doubt the Pennsylvania Lines run thru the finest country for scenic beauty to be found in all the East.

The Grand Army of the Republic holds its 33rd annual meeting in Philadelphia, Sept. 4 to 9, inclusive. Many bee-keepers are also old soldiers, and likely members of that splendid national organization of war veterans; all such, as well as other bee-keepers, should take advantage of the low rates secured by the G. A. R. people, and be in Philadelphia during the week of the Grand Army meeting and the bee-keepers' convention. The round-trip rate from Chicago, over the Pennsylvania Lines, is only $16.45. That means you will be given a ride of 1,645 miles.

The best trains over the Pennsylvania Lines leave Chicago daily at 3:00 p.m. and at 11:30 p.m. Grand Army rates going are in effect Sept. 1, 2, 3 and 4. We expect to leave on the 3:00 p.m. train Monday, Sept. 4, which arrives in Philadelphia the evening of the next day at about 6:00 o'clock. We should be pleased to have any bee-keepers or others west of Chicago go with us on that train. If you desire it, we will be glad to make any advance arrangements for you that you may wish, so that you can be sure to make connections with the train that leaves Chicago at 3:00 p.m., Sept. 4, or on the one starting at 11:30 p.m.

Mr. G. M. Doolittle, of Onondaga Co., N. Y., reports as follows for the season of 1899, in the Progressive Bee-Keeper for August:

"Honey crop from basswood short this year. Honey not all off, but enough so that I can estimate pretty closely that the average will be from 40 to 50 pounds of section honey per colony."

* * * * *

Messrs. W. E. Hatterman and Chas. Beck are two bee-keepers living about ten miles north of Chicago. We called on them Saturday, Aug. 12. Mr. Hatterman has 22 colonies run for both comb and extracted honey, and Mr. Beck about 30 colonies for comb honey. He expects to average 50 pounds to the colony, and retail it from house to house. The principal honey source this year is sweet clover. Mr. Hatterman thinks he will work for extracted honey exclusively hereafter.

* * * * *

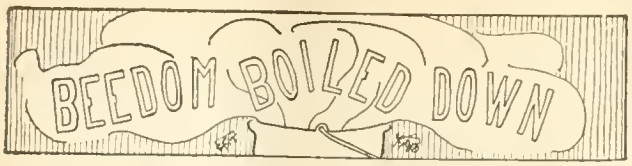
Mr. R. F. Holterмann, for many years editor of the Canadian Bee Journal, feeling that he has received a "call" to go into religious work as an evangelist, has severed his editorial connection with that paper, and will "go wherever there appears to be an open door, to preach the word of God." He so announces in the August issue of the Canadian Bee Journal. We wish him abundant success in his future efforts, in a field which likely is not altogether a new one for him. A man can usually do his best work along the line to which he feels specially drawn.

* * * * *

Prof. A. J. Cook, of Los Angeles Co., Calif., spent Monday, Aug. 14, with us, when on his way back to his home in the sunset land. We fairly envy those California bee-keepers in having such a man as Prof. Cook among them. We wonder if they really appreciate him. We never before had a good opportunity to get acquainted with him, but now—well, it was a feast to be with him, and we only regretted his stay was necessarily so short; but he had to get back as soon as possible to take up the farmer's institute work which must be done before the term opens at Pomona College, where he is one of the honored instructors. What a pity he could not stay in the East long enough to attend the Philadelphia convention, and thus meet many of his old friends!

* * * * *

Bargains in Incubators.—It is well known to readers of newspapers that prices generally have been advancing steadily of late, including those for labor, lumber and metals of all kinds. As a result, the prices of all manufactured articles must soon follow suit, including the prices of incubators and brooders. This simply cannot be helpt: there is no way of getting around it. The Cyphers Incubator Co., Wayland, N. Y., therefore hereby give notice to interested persons that so soon as their new catalog and price-list for 1899-1900 is issued (which will be about Nov. 1 to 15) the prices of their incubators and brooders will be increast fully 20 percent. All who think favorably of buying a strictly first-class incubator this fall or next winter will find it much to their advantage to immediately correspond with the Cyphers Co., in order to obtain what is wanted at the present low prices. The fact is that the Cyphers Co. is in a position, just now, to save a limited number of customers from $7 to $18 net cash, depending on the size of machines bought. For full particulars, address the Cyphers Incubator Co., Box 50, Wayland, N. Y., not forgetting to say you saw their advertisement in the American Bee Journal.



The Dzierzon Theory, says Deutsche Illustrierte Bienenzeitung, so far stands as solid as a rock, and it will require more proofs than have yet been brought against it to budge it in the least.

Bees and Colors. R. Hamlyn-Harris says in the British Bee Journal that scarlet blossoms seem to be entirely ignored by bees. Blue, violet, and white are their pet colors. Yellow is less frequently visited, and green is treated with extreme indifference.

Celluloid Quilts seem to be in use in England, according to accounts in the British Bee Journal, giving an impervious covering thru which one can see. Glass has been used to a limited extent in England and in this country. Celluloid is also used for queen-excluders.

"Draper's Barn" is what the new hive on trial by the A. I. Root Co. and some others is playfully called. It is the same as a 10-frame Langstroth hive, only it is 2⅛ inches deeper. Its 10 frames are equivalent in comb surface to 12¾ ordinary frames, and two of the "barns" hold more than three 8-frame hives.—Gleanings in Bee-Culture.

Putting Bees Out of the Cellar, Mr. Young says, in the Canadian Bee Journal, he does without paying any attention to where they are placed, and without putting out at different times. He says: "I start about 10:30 or 11:00, and when I get thru you would think they were swarming. I used to try a few to-day and a few to-morrow. Those you let fly to-day, to-morrow are ready to jump on the other ones."

Rietsche's Uncapping-Fork is highly spoken of in the German bee-journals as a better tool than a knife for uncapping. A writer in Elsass-Lothringischer Bienen-Zuechter says the needles of the fork slip more easily under the cappings than the knife-blade; there is no tearing; uneven and tender combs are easily and quickly operated on; the fork works more easily and rapidly than the knife, and it costs less.

"Plumping" is a term used in the British papers, an explanation of which is kindly sent by Mr. H. Edwards. As used by Mr. S. Simmins, colonies in order are plumpt by having given to them from other colonies all the brood they can care for, these other colonies being stimulated to fill up the places made vacant by the removed brood. The queens from which the brood is taken are thus forced to lay a larger quantity of eggs, and the colonies upon which "plumping" is practiced are earlier made ready for the harvest. The plumping begins with the strongest colonies.

How Long do Worker-Bees Live? About 45 days in the working season, says Doolittle, in Gleanings in Bee-Culture. About June 10, put an Italian queen in a colony of blacks, and in 40 days from the time the last black bee came out of its cell there will still be many black bees. On the 44th day very few indeed will be left, and in 45 days not one will be found in the colony. But a bee leaving its cell the first of October may live eight months, and in rare cases nine. The difference in the amount of work done makes the difference in the length of life.

Age of Combs.—Leading bee-keepers of England seem to have a very different opinion from that entertained in this country as to the time when brood-combs become too old to be desirable. Says the British Bee Journal:

"We strongly advise the removal, every spring, of a couple of outside combs—choosing the oldest or most faulty ones, of course—and substituting frames fitted with full sheets of foundation. Then, after the bees have fairly started to build out the foundation, the frame may be placed right in the center of brood-nest without the slightest fear of chilled brood. By this means we get two new combs built every season, and by gradually renewing the whole not only keep the brood-combs in good condition, but avoid faulty ones, and thus conduce to the comfort of handling workable frames when manipulating our hives."

That is equivalent to saying that in a 10-frame hive no frame should be suffered to become older than five years. On this side they would hardly be objected to on account of age if they were five times as old. Why this great difference on the two sides of the water?

Travel-Stain on Honey.—A. J. Wright indignantly denies in Gleanings in Bee-Culture that the dirty feet of bees have anything to do with travel-stain, or rather he denies that bees ever have dirty feet. He offers this very interesting method of determining whether their feet are dirty: Take a board not less than 10 or 12 inches square, tack on it a piece of clean white paper, and place it before a hive so that the bees will be compelled to travel over it on entering and leaving. If placed early enough in the morning and taken away each night before dew falls, he thinks it will be as white at the end of a long honey-flow as at the beginning. He thinks travel-stain is due to the neglectful habits of bee-keepers in not removing the old bottom-board with its dirt and litter, and replacing it with a clean one at the time of putting on sections, as he thinks this dirt is carried up by the bees and used in the cappings of the sections.

Handling Bees Without Smoke.—Miss Gayton, prominent among the bee-keepers of England, never uses smoke in handling bees. Whether one who has a given amount of work to do in a given time could always afford to wait for bees to get in the proper frame of mind for easy manipulation is a question. But in many cases it might be useful to know how to get along without smoke. Miss Gayton says in the British Bee Journal:

"In 1879 I introduced my first Ligurian queens, and was delighted with the gentleness and activity of the Ligurian bee. I have not introduced any Ligurian queens since. The hybrids proved to be splendid workers, but require cautious handling, as they have not good tempers. I may mention that when manipulating I always don a bee-veil, but never use smoke, and find that bees are more gentle without it. Sometimes in autumn I use apifuge or a clean wet cloth over the hive, but I usually trust to letting light in gradually and only keeping a small part of the hive open at a time, and then, after waiting a few minutes, I go gently and quietly to work, the bees really retiring out of my way. If, however, anything has made a colony very irritable, I close it up at once and try another day, as I find if a colony is thoroly 'roused' it takes a long time for them to become peaceably inclined again. If I can manage to do my work without causing the smell of the sting-poison to be noticed, I find no difficulty in handling the frames."

Miss Grayton depends upon letting in the light "gradually," and "waiting a few minutes." Adam Grimm practiced somewhat on the same line, but he took no account of the matter of light, simply "waiting a few minutes" for the bees to quiet down after being first disturbed, altho that "few minutes" sometimes was only a few seconds. Possibly the waiting allows the bees time enough to fill themselves with honey, or perhaps to *begin* filling with honey, for when a bee once begins filling with honey it is no light matter that will make it stop.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and thoroughly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

The Premiums offered on page 541 are well worth working for. Look at them.

Root's Column

HONEY WANTED.

We are in the market for both comb and extracted honey. If you have any to offer, let us hear from you AT ONCE stating the grade, number of pounds of each grade, from what source gathered and HOW it is put up. If extracted, send a sample by mail. . . .

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Five-gallon square Cans are now $8.00 per ten boxes instead of $9.00.

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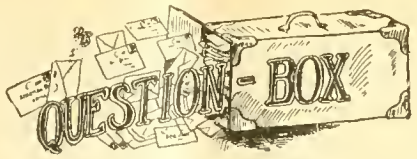

In the multitude of counsellors there is safety.—Prov. 11-14.

Ventilation or Protection in Winter.

Query 101.—Is ventilation or protection necessary in winter? If so, give one or more methods.—UTAH.

E. France—Yes, both. A proper answer would be too long for this department.

P. H. Elwood—The cellar seems to be necessary in this Mohawk valley (N. Y).

Dr. C. C. Miller—Both necessary, but it would take all this page to give methods.

G. M. Doolittle—A good sized entrance for ventilation, and chaff hives for protection.

Dr. J. P. H. Brown—In my climate (Georgia) no extra preparation is necessary.

S. T. Pettit—Yes, to both. Space is too limited to do justice in these important cases.

A. F. Brown—That depends whether you live in Florida or Utah. Here in Florida it is not needed.

Prof. A. J. Cook—Not protection here in California, and ventilation only at entrance anywhere.

Eugene Secor—Yes, both, in my locality. Entrances wide open in a sufficiently warm, well-ventilated cellar.

E. Whitcomb—Protection is as necessary to bees as to stock. 1. Cellar-wintering. 2. Pack on summer stands.

J. M. Hambaugh—Both. This department will not give room to methods. Read some good, standard bee-book.

C. H. Dibbern—Yes, sir, in this climate (Illinois) it is, and in my opinion a good cellar is the best and cheapest protection of all.

Mrs. L. Harrison—Yes, to both. Protect from winds, and put some porous material above the bees, with a chance for the breath of bees to escape.

W. G. Larrabee—Yes. I use a double-walled hive packt with planer-shavings, and a crate filled with shavings with cloth bottom to cover all in winter.

O. O. Poppleton—This is also a question of locality. In Iowa I preferred thoroly well constructed chaff hives, with good windbreaks around the apiary.

C. Davenport—It is in my locality. I winter my bees under ground, and usually give them ventilation by means of a pipe or tube running up thru the roof.

Adrian Getaz—Protection is absolutely necessary. So is ventilation. But this should not interfere with the warmth. A good sized entrance gives all the ventilation needed.

Mrs. J. M. Null—Rather indefinite. Both are desirable. Chaff hives answer admirably for out-door wintering, or ordinary hives protected on the same principle as chaff hives.

Rev. M. Mahin—This is a very large question. Ventilation is certainly necessary in winter in all climates and conditions. The amount of protection in out-

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in all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out; no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. ELECTRIC WHEEL CO., Box 16 QUINCY, ILL.

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Sweet Clover (melilot).....	60c	$1.00	$2.25	$4.00
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Add 25 cents to your order, for cartage, if wanted by freight.

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Queens Untested Italian, 50c each; Tested, $1.00 each. Queens large, yellow, and prolific. Address,

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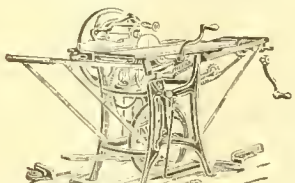

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160 acres LAND in Reynolds Co., Mo., for 50 colonies. C. J. ANDERSON, LA VERGNE, ILL.

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ALBINO QUEENS If you want the most prolific Queens—If you want the gentlest Bees—If you want the best honey-gatherers you ever saw—try my Albinos. Warranted Queens, $1.00; Untested, 75 cents.

9A26t J. D. GIVENS, LISBON, TEX.

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Before placing your order, to send me a list of what you need in

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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

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Institute of Phrenology,

Pres. MRS. CHARLOTTE FOWLER WELLS, incorporated in 1866, opens its next session on Sept. 5, 1899. For prospectus send free on application to the Secretary, care of

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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PAGE

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so many fence co's ads as you used to, but you still find ours every week and never two weeks alike.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
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Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

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EXTRACTED HONEY

We are now in shape to **buy** Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank The Brighton German Bank Co. both of Cincinnati, O.

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door wintering depends upon climate and the character. For many years I have not lost a colony that had plenty of stores and plenty of bees without any protection. I keep the entrances wide open. I live in Henry Co., Ind.

R. L. Taylor—Yes, ventilation always, and protection in some climates. Your question is scarcely intelligible. If you mean for bees in-doors, I venture a good cellar and absence of bottom-boards.

J. A. Stone—In central Illinois we think it is, as those who did not protect their bees last winter lost 50 percent of them. We put ours into the cellar and ventilated thru a window by a device that lets in the air but not the light.

R. C. Aikin—Yes, both. Protection to conserve heat, say chaff to absorb it and hold it. Chaff above, but so that air can freely pass thru it to *completely carry off moisture*. Ventilation and compact stores are ahead of protection.

J. E. Pond—I always winter bees on the summer stands, and I deem ventilation a necessity. I allow about ½ inch over the tops of the frames, covering with a cloth of some kind and filling over that chaff, dry leaves, or other absorbent.

Mrs. A. J. Barber—We have tried several plans for protection on the stands. We prefer the empty super on top of the brood-frames with a sack of sawdust big enough to fill the super laid in. This gives both protection and ventilation. We seldom lose a colony.

D. W. Heise—I like the hive well packt on the top, and sides if found necessary, but don't want much protection in the way of a windbreak. For ventilation I give $\frac{3}{8}$x5 or 6 inches. This applies to outside wintering, of course, which I think the questioner has reference to.

J. A. Green—I think protection pays. I use packing boxes, six or eight inches larger each way than the hive, filled with leaves or planer-shavings. The only ventilation I care for is thru an entrance 12x$\frac{3}{8}$, so arranged that it cannot become clogged by ice or dead bees.

Emerson T. Abbott—I do not bother much about ventilation. Plenty of food in the right place, above the cluster, is the thing. Protection from sudden changes is an aid to successful wintering. Bees in a *cluster* do not *freeze*—they *starve*. (Dr. Miller, please take notice).

Dr. A. B. Mason—No, but both are a great benefit. My present method is to pile the hives one on top of another, 4, 5 or 6 high, without covers or bottom-boards in the cellar. I use a quilt of enameled cloth, and place sticks an inch square on top of each hive to set the next one on, leaving the cover on the last or top hive.

G. W. Demaree—In my locality (Kentucky) I winter bees on the summer stands. Plenty of stores, and just let them alone. The past winter, in February, my apiary survived eight zero days without a let-up—and during this unknown arctic spell for this locality, there were 36 consecutive hours that the temperature did not rise above the 10° mark below zero. At that time nobody expected to hear the "buz" of a bee's wing any more; but the bees lived.

E. S. Lovesy—Yes, in all northern localities I believe both are good. Here (Utah) protection is good, but the bees must have sufficient ventilation to keep them dry. The bees appear to winter all right in a frost-proof house, and where there is no smelter smoke. As a rule, the bees winter fairly well with a little packing of chaff or lucern leaves over them, but one end of the cover should be raised about $\frac{3}{8}$ of an inch; this will give them ventilation and keep them dry.

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS—reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

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troubles can obtain valuable advice, FREE, by addressing

DR. PEIRO,
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Write at once. Enclose return stamp.

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Gold! Gold! Queens!

Leininger Bros' Queens are worth their weight in gold; large, prolific, yellow, and great RED CLOVER workers. We have secured 112 pounds of honey per colony as the result of the past poor season. Queens from the above strain will be sent by return mail at 50 cents each; ½ doz., $2.00. Queens warranted purely mated Italian.

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HAVE ONE OF MY

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but I have two others from which I am rearing all queens. The A. I Root Co. say

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they ever had came from my apiary, and so say 5,000 other bee-keepers, and I can produce the letters backing up this statement. I have bred out the swarming and vicious characteristics from my strain of bees so that they are practically non-swarmers, and as gentle as one could desire. One Queen, $1.00; two Queens, $1.80; six Queens, $5.00; or $9.00 per dozen. Everything guaranteed.

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We will buy it, no matter where you are. Address, giving description and price,
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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
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If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

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MR. QUIRIN—Dear Sir:—The queens I got of you last year are giving good satisfaction, better than some untested queens I paid $1.00 for, to breeders who sell for no less at any time of year. Yours truly. EDWIN BEVINS.

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GENERAL ITEMS

Hunting Bees in Trees.

On page 445, L. J. Clark asks for information about hunting wild bees. I am somewhat of a bee-hunter myself, and possibly my way might help him. It is as follows:

After basswood stops blooming (which in this locality is usually in July), I take some unfinisht sections of light honey for bait, and three small boxes to catch bees in. I select a clear spot in the woods near some flowers where I can obtain bees. I divide a section into three parts, placing a part in each box. I then catch a bee in box No. 1, and place near a section outside, which I have for them to return to. Next I catch a bee in box No. 2, and then uncover No. 1, and so on until I have quite a number of bees returning, which usually takes about two hours. I think that's where some bee-hunters make a mistake, by not catching enough bees, and not giving them sufficient time to return and locate the bait. I find that they will return to the open section quicker than going into the boxes.

After they are working nicely on the bait, I procure my lines, there being some-

Queens at half price.

Balance of season. Select Tested Italian Queens, $1.00; Untested Italian Queens, 50 cents. Every Queen warranted to give satisfaction or your money back. Queens by return mail as long as they last. Address, F. A. CROWELL,

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Being the cleanest is usually workt the quickest of any foundation made.

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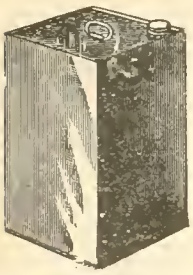

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

T. F. BINGHAM, Farwell, Michigan.

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times two or three. I then start out to hunt, leaving the bait where it is.

If I fail to find the tree, I try another line if I have more than one. If I should fail on that, I would then go to the bait, take away the outside section, and open the boxes. By this time they will be working strong enough to enter the boxes. After quite a number of bees have settled in the boxes, I close them and move up a short distance directly on one of the lines. Then I open the boxes. In this way I get rid of the bees belonging to the other lines, and strengthen the line I am following. I seldom fail in finding them in this way.

A few points to be remembered: Use nothing but new, light honey for bait; catch plenty of bees, and give them plenty of time to return and locate. By this method, and by hunting their watering-places, I usually find a number every season. JOHN PIDDINGTON.

Southern Wisconsin.

Drouth Lessens Honey Crop.

We are thru with our spring and summer crop of honey, having a very good yield from white clover, but we had a cool, rainy spell when the clover was at its best, which, coupled with the drouth that followed soon after, made us lose, I think, fully half of our honey crop; however, I am not grumbling, as there is a good prospect for a fall crop from aster. The drouth is broken now, as we had a light shower this morning, which with others we had about a week ago have brought the aster and other plants out wonderfully.

Mr. Peter Brickey, probably the oldest bee-keeper in this county, was laid to rest July 20. Mr. Brickey had been an active bee-keeper in his time.

J. WILEY MOUNTJOY.

Anderson Co., Ky., July 30.

Feels Much Encouraged.

I have been keeping bees five years, and this is the first time my hives have been filled. I have 22 good colonies, and will probably take off 1,200 pounds—some comb honey, but mostly extracted. I feel very much encouraged. I like the business, and I shall give more of my time to it.

E. B. LANGDON.

Douglas Co., Minn., Aug. 8.

Still a Little Foul Brood.

There are a great many in this county keeping bees who are not at all informed, who should take a bee-paper and read up.

This is my first year as inspector, and I of course have a good deal to learn. I find the bees in this county are in quite good condition, considering the cold and backward spring we had. We have a little foul brood, confined to *one end* of the valley, but hope soon to have it stampt out. We are using radical measures, hoping the sooner to get rid of it. We burn it—bees, hive and honey.

Owing to the cold, late spring there is quite a good deal of chilled brood, as we had it below the freezing point after the bees had started brood-rearing.

Our comb honey here is fit for a king—the finest in the country—and should bring more than the present price (9 cents.)

J. C. CARNAHAN.

Mesa Co., Colo., Aug. 6.

Bees Working on Melon Bloom.

[The following is a reply to Mr. Grant De Larm, of Platte Co., Nebr., written by Hon. G. W. Swink, of Colorado, who has had extensive experience with bees and melon-growing:—EDITOR.]

I don't think your bees would store much honey from the melon blossoms. We don't consider the yield of honey very much from melon bloom, but they get a good deal of pollen from it. Your bees will store a good deal of honey from a No. 1 sweet water-

melon, but it will be thin and dark, and I never thought it very good to winter bees on. But the bees would be of great value to the melon-growers, to fertilize the blossoms so the melons will set. We get ⅔ more cantaloupes now than we did before we had bees; and the same with water melons. G. W. SWINK.

Otero Co., Colo.

White Honey Crop Short.

The crop of white honey is very short in this vicinity this season, but the prospects are favorable for a good crop of dark honey. A. W. SMITH.

Sullivan Co., N. Y., Aug. 5.

Gathering Some Surplus Honey.

Lately the best colonies of bees have been gathering some surplus—and fair quality, not black stuff like last year. I just hear that Earl Baker, a young apiarist in the edge of the city, has been harvesting quite a lot—presumably sweet clover, which is plenty down there, and scattering this far out. E. E. HASTY.

Lucas Co., Ohio, Aug. 7.

A Correction and Report.

Kindly correct the mistake in my fifth paragraph on page 515, where it reads, "The surface retains the heat," etc. It should read: The atmosphere above retains the heat, etc., and the warm atmosphere coming in contact with objects of the earth's surface, coutract and give off moisture, etc.

Bees reduced from 60 colonies to 9, selling $80 worth; 25 colonies froze during the severe winter, and 9 rousing colonies remain in 3-story 10-frame dovetail hives, full of honey and brood from top to bottom. A. B. BATES.

Franklin Co., Mo., Aug. 18.

Laying Workers with Sealed Cells.

We had a laying-worker experience in our apiary this summer, that was very peculiar, and also very interesting. It occurred thus:

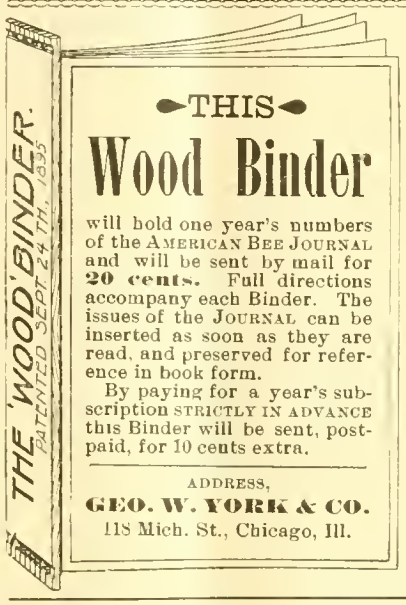
Two colonies cast a small after-swarm, one a black and one a beautiful hybrid, but no queen accompanied the blacks. The two were hived together. The young queen became fertilized and laid profusely for more than a month, but for some reason she suddenly disappeared, and some of the nicest queen-cells I ever saw were started. The strange part of the case was this: After the cells were sealed, laying workers made their appearance. As there were few or no drones in the hive, I thought perhaps those workers were laying to produce drones to fertilize the young queen, but, of course, as the eggs were not laid until after the queen-cells were sealed, the queen would perhaps be laying before the drones hatcht. As I have said before, I thought *perhaps* those workers were laying to produce drones to fertilize the queen, for I have no positive proof of it. Altho it does look doubtful that those would-be queens would know what their eggs would develop into when they were laying them, yet that is the conclusion I came to.

I was *very* much surprised also to find the bees starting cell-cups when they had as nice cells as they could wish. It has been stated by one of the most prominent bee-keepers in the United States, that laying workers will never appear in a colony that has brood at the right stage for queen-rearing; this is, however, an exception to that rule. But what rule is there that does not have exceptions?

LATER.—Yesterday (July 29) I examined the hive. What *great* changes had taken place! The young queen had begun to lay, the laying workers had disappeared, and no trace of their work left except the corpse-like pupæ which were dragged from the cells, and the milky juices being greedily devoured by the bees. Now, what do the readers of the Bee Journal think of such a colony of bees?

WILLIE T. STEPHENSON.

Massac Co., Ill., July 30.



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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Aug. 19.—A few consignments of comb honey received this week, some cases of fancy in plain sections sold at 15 cents, other lots at 13@14 cents, while No. 1 sold at 12@13c; amber grades, 10@11c; dark, 7@9c. Extracted, white, 7@8c; amber, 6½@7½c; dark, 6c. All selling well. Beeswax, 25@26c.

R. A. BURNETT & CO.

KANSAS CITY, Aug. 10.—The receipts of honey are light, demand fair. We quote: Fancy white comb, 15c; No. 1, 14c; No. 1 amber, 12@13c. Extracted, white, 6@6½c; amber, 5½@6c; dark, 5@5½c. Beeswax, 22@25c.

C. C. CLEMONS & CO.

NEW YORK, Aug. 9.—Old stock is entirely cleaned up, and good demand now for new crop. We quote: Fancy white, 13c; No. 1, 12c; fancy amber, 11c; No. 1, 10c. Extracted in good demand with market firm. Fancy Florida, 7½c; choice, 6½@7c; amber, 5½@6c. Other Southern, 65@70c per gallon for choice, and 55@60c for common. No demand for buckwheat honey at this time. Beeswax dull at 25@26c.

HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 9.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾, light amber, 6½@7c. Beeswax, 26½@27c.

There is not much offering, either here or at producing points. Market is firm at the quotations. Business is of necessity largely of a light jobbing character.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c.

A. B. WILLIAMS & CO.

BOSTON, Aug. 18.—Fancy white comb, 1-pound sections, 15@16c; A No. 1, 14c; No. 1, 12@13c; No. 2, 10c. Light amber extracted, 7c. Beeswax, 27c.

The demand for honey is very light, as is usual this time of year. While stocks are extremely light, the old being practically gone, and no new as yet. Owing to poor crop prospects prices are firm, and it looks as if they would remain so. BLAKE, SCOTT & LEE.

BUFFALO, Aug. 4.—The honey season has opened in a moderate way, a few small lots of new arriving. Extra fancy 1-pound combs, 13@14c; fair to good, 11@12c; dark, poor, etc., 8@9c.

BATTERSON & CO.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.

PEYCKE BROS.

DETROIT, Aug. 19.—There has been no offerings of new honey and old is fairly well cleaned up. Fancy white we think would bring 14 cents, other grades proportionately cheaper. White extracted, 7@8c; no dark to quote. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

WANTED. Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

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Order Early

There are indications that the demand for SUPPLIES will be very large this season, and everyone should order as early as possible. We have large facilities for manufacturing all kinds of

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And will serve our customers as quickly as possible.

Falcon Sections are the Finest Made.

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To say to the readers of the BEE JOURNAL that

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has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen	$1.00
6 Untested Queens..	4.50
12 Untested Queens	8.00
1 Tested Queen	1.50
3 Tested Queens....	3.50
1 select tested queen	2.00
3 " " Queens	4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

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Beeswax Wanted at all times. CHAS. DADANT & SON,

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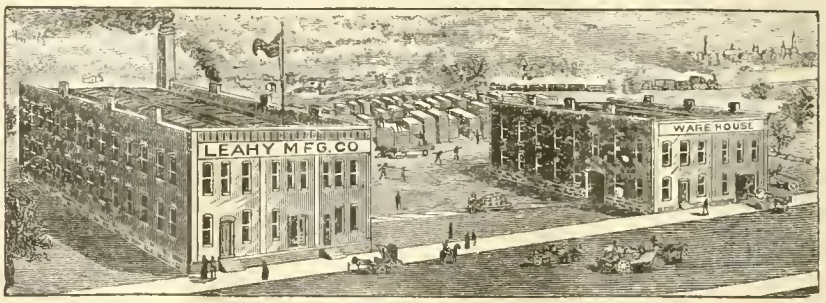

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Honey Wanted Any Quantity

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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., AUGUST 31, 1899. No. 35.

CONTRIBUTED ARTICLES

Foul Brood—Its Symptoms and Cure.

BY N. E. FRANCE.

FOUL brood is a contagious and fatal disease, dreaded most of all by bee-keepers, as the disease kills the bee in the larval age, usually from five to nine days from the egg of the queen-bee. The honey or combs from an infected colony contain the germs of disease, and, if left where bees can get to them, will be sure to spread the disease. Never buy or use old combs, hives, bees, queen-bees or implements from any apiary unless you are certain they are from healthy bees. Often have I traced the spread of the disease to such carelessness.

SYMPTOMS OF FOUL BROOD.

1. Colony or swarm of bees appear weak; do not protect the hive-entrance.

2. A part of the brood is dead, the cappings sunken and of a darker color. Ragged holes soon appear in the cappings.

3. At first the bee shows brown streaks, changing to a shapeless mass on the lower side of the cell, in color much like a cup of coffee when milk is added. At this stage it will be sticky or ropy, and if punctured with a stick will draw out much like warm glue.

4. There is a peculiar smell to foul brood in its advanced stage, much like old glue when heated. In many cases I have seen the odor was easily noticed several rods away.

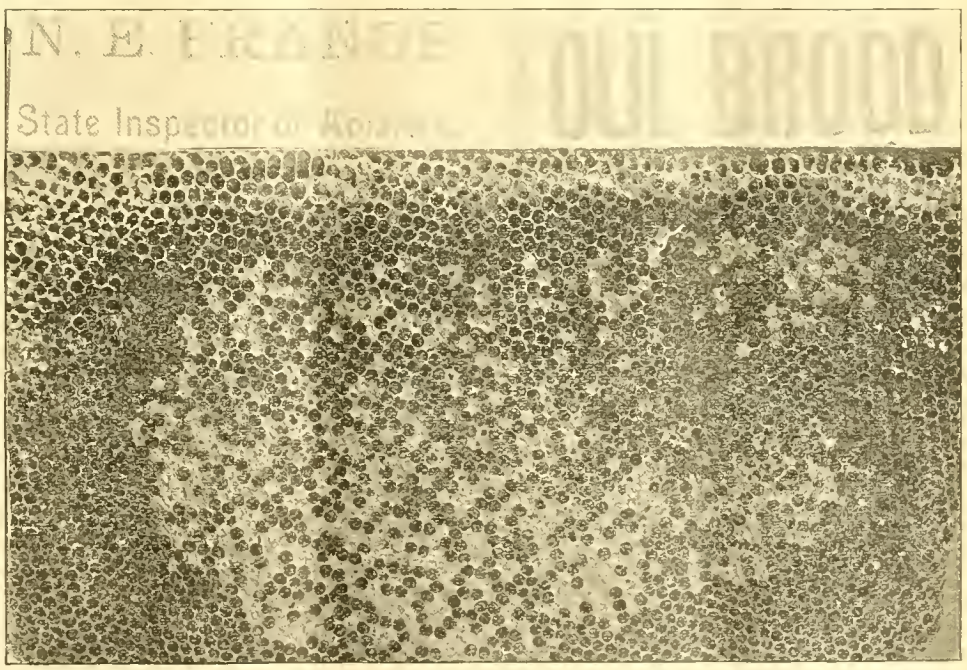
5. Old, diseased combs will have some cells with the sunken cappings, underneath which there will be in some this brown, ropy substance; others will show it dried down to a black bunch at the front end of the cell, and still many other cells will have this dried down to a very thin scale, hardly noticeable. But in all these stages it will stick fast to the lower side-wall. Please examine closely the accompanying picture of a diseased comb, containing all these stages described, taken from a large apiary where every colony had died with the disease.

TREATMENT OF FOUL BROOD.

1. The best time to cure foul brood is during the honey-gathering season; but, with great care and feeding, it can be done at other times. First of all, have a clean hive, a new one is best, but the old hive can be scraped clean, and, to be sure, I either boil the hive well, or paint it inside with kerosene oil, set afire, and, when well going, throw in some water and close the hive tight.

2. In the evening, or when no danger of robber-bees, exchange the old hive on the stand for a new one. Shake all the bees into the clean hive; the hive to have some strips two inches wide of comb foundation on six or eight frames. I also cage the queen and fasten the cage between the starters. Close the hive and part of the entrance and let them alone four days.

3. After four days exchange these frames and starters for clean frames and sheets of comb foundation. Release the queen and see that they have feed from this time on, either from flowers or being fed healthy feed. Honey from a diseased colony is not safe unless kept boiling and constantly stirred for at least an hour. All combs from such a



[This illustration and article are taken from a circular issued by Inspector N. E. France, for the use of Wisconsin bee-keepers.—EDITOR.]

colony should be burned in a pit on level ground, so that any honey or wax not burned will be melted in the bottom of the pit, to be covered by the earth taken from the pit. Beeswax, honey, or refuse of a solar wax-extractor is not heat enough to kill the germs of foul brood; but beeswax as now made into comb foundation is safe to use. I do not believe in burning property that can be saved, and know, by the experience of many, if these directions are carefully followed, it will cure foul brood.

PICKLED BROOD—SYMPTOMS.

Some seasons pickled brood is very bad, and in a few cases I have known it to reduce large colonies to doubtful hopes, but those same colonies after treatment were in a month free from the disease, never showing it since. It may take as careful handling as if foul brood.

The larval bee shows light-brown spots: a little later the capping, of natural color, has a small pin-hole. The bee underneath will be round, having a black, dried, hard, pointed head, often turned up, Chinaman-shoe like. The skin of the bee is quite tough, and, if punctured, the liquid portion underneath will run out, somewhat colored, as thin as water, but never ropy like foul brood. It has little or no smell, does not stick to walls of comb, is easily pulled out, and if the colony is properly cared for in nearly every case the bees soon remove them all.

Never make your bees use old black combs, or combs with dead brood left in them, better make them into wax, and replace with sheets of foundation. If the queen shows feebleness by putting several eggs in one cell, missing others, so that the brood is irregular, I should kill her, and in a week remove all queen-cells from her brood, then introduce a good queen or give a frame of brood with eggs in it from a good colony. Keep all colonies strong.

I do not think the most of pickled brood is owing to the queen, but rather to lack of proper food and heat at stated times. In most cases I find it from a lack of unsealed honey and pollen stored near the young brood. There come times in the spring (between dandelion and white clover bloom) with no honey coming in, and the old bees eat this uncapt honey, starving the larval bee at an early age. The result is, it may be pickled brood, and at a date late enough they are gathering honey. If a little careful feeding each day of these shortages is practiced, there will be little or no pickled brood. Rye flour in early spring often will be taken as pollen by the bees, if put out-doors in a warm place. Strong colonies with plenty of good food and young laying queens seldom have any pickled brood.

Grant Co., Wis.

Honey-Dew a Natural Plant Secretion.

BY C. C. PARSONS.

FROM time to time there appears in the various bee-papers articles on the subject of honey-dew. In nearly every instance what is written is written from the standpoint that it is an *animal* secretion. I do not know who is responsible for the prevailing idea that that is its chief source—somebody said so a good while ago—some prominent writer wrote it—then, some otherwise well-informed persons accepted it without any investigation, and publisht it to the world as a fact. So it has found a lodgment in the minds of bee-keepers (or writers on bee-keeping) just as the comb honey "pleasantry" of a few years ago was accepted by the masses of the people. *The one is no more absurd than the other.* If all the "bug-juice" articles that have been written—not only by the "small fry," but by those of much knowledge of the bee-keepers' occupation—were printed in a book, and read by all the people, it would do infinitely more to lessen the consumption of honey than did the false statements of the scientist when he said that comb honey could be made by the hand of man. It is no wonder that so many fall into the error when so many of our prominent writers teach, or admit, that it is no error.

Some of the most voluminous advocates of the theory of animal secretion have declared that there is no such thing as "real honey-dew." If there is no such thing as "real honey-dew," there has been much said upon a visionary subject, and all that has been said of it as an animal product has not caused a single person to become a consumer of honey. I do as firmly believe that there is real honey-dew as I believe there is a real Henry Jones. There may not be a Henry Jones in every community.

I saw honey-dew in the days of my childhood, and lickt it from the leaves of bushes where it had fallen from its source above. Since I have kept bees in Alabama, the honey-dew has not failed a single year. It is usually in sufficient quantity to be available as a source of surplus honey. It comes *on time* if it comes at all—just the same as the blooming of the trees and plants. The time is fixt—not on a certain day, but at a time when the vegetation arrives at a certain stage of development. The quantity depends upon the condition of the vegetation at that particular stage, which is determined to a great extent by previous and present meteorological conditions.

What is honey-dew? It is the material food of the plant, digested and taken into the circulation of the plant in greater quantities than is needed by the plant, flowing out thru the vents provided by Nature as safety-valves. So far as I have been able to observe, this substance is essentially the same, whether exuding from the outlets in the flowers, upon the stems, or on the surface of the leaves. It is usually clear as crystal, and that gathered from the leaves does not partake of the flavor and aroma of the plant that produces it, but is sometimes contaminated by coming in contact and being mixt with other substances. Fermentation or decomposition, also, sometimes degenerates it into an unwholesome substance.

The most copious flow of honey-dew I ever saw was in 1897. It was from the pine. In early morning and late in the evening it could be seen dripping from the trees till all the leaves, and even the bare ground beneath them, were covered with the nectar. The bees swarmed over the trees, and the hives were filled as I had never seen them before. The honey was light amber, and of fine flavor, and gave my customers the best satisfaction of any honey I ever produced.

While this honey-flow was on, there was scarcely any honey-dew to be found except from the pine, and every pine was dripping with it—the small as well as the great. Isolated bushes, overshadowed by trees or other growth, that were not producing honey-dew at this time, and those standing in open spaces away from any overhanging trees, gave me a most favorable opportunity to observe the source of this "real honey-dew." 'Tis true, a few insects could be seen with the natural eye, and with a powerful glass many more were seen, but from their diminutive sizes, and insignificant numbers, I would as soon try to believe that the drop of rain water was secreted by the animals it contains, as to try to believe that these insects secreted all this honey-dew.

Prof. Cook expresses astonishment that so great an error should find a place in our dictionaries. If he will carefully read his own evidence in the "Bee-Keepers' Guide," 15th edition, page 335, and compare it with his statement in the American Bee Journal of Jan. 12, 1899, first page, he may be able to give another reason why error sometimes finds its way into good company.

Jefferson Co., Ala.

Value of Sweet Clover for Forage and Honey.

BY H. R. BOARDMAN.

I AM surprised that any bee-keeper of experience, who has had a reasonable opportunity of observing, should report sweet clover anything less than a first-class honey-plant; and yet I am aware that there are a few adverse reports coming from very reliable sources.

I am quite sure—yes, I think I know from my own experience and observations with this plant, extending thru a period of a dozen years or more—that it is unsurpast, and equaled only by the noted alfalfa; and these convictions are supported by the opinions of some of the most practical and reliable bee-men of my acquaintance.

The last season was the first for several years when white clover alone yielded me any surplus, and this, too, with the fields white with its bloom in every direction as far as bees could fly; and yet I should not be warranted in claiming that white clover was not a good honey-plant. It has a world-wide reputation that is unimpeachable. If it were no more abundant than its cousin it would hardly have gained this enviable reputation—certainly not in the last few years.

I think it has been generally conceded by practical bee-keepers that it will not pay to plant for honey alone. This conclusion is undoubtedly a safe one. We must, then, look for some other value besides that of honey, in order to recommend sweet clover as a field crop.

I once supposed, as most people do now, that sweet clover was entirely worthless as a forage-plant for stock—

that nothing would eat it; but I have demonstrated to my own satisfaction that horses, cattle and sheep will not only learn to eat it, but will thrive upon it, both as pasture and dried as hay, and that hogs are fond of it in the green state. I say, they *learn* to eat it, because most stock have to acquire a taste for it, not taking readily to it at first. I gave it a fair trial last summer. My horses and family cow fed upon it almost entirely during the dry part of the season. They became fat and sleek, without the help of grain or other feed. The milk and butter from the cow showed no objectionable flavor. The amount of feed furnisht was something surprising. It has a habit of continually throwing out or renewing its foliage and its bloom; also, when cut or fed back, it keeps it constantly fresh. After gaining a growth of four or five feet in height in dense masses in my pasture it was fed down entirely, even the coarse stalks, so that at the close of the season nothing was left. The seeding was, of course, destroyed; but in my desire to put to a severe test the feed value of the crop, this was lost sight of.

Sweet clover, like the alfalfa, sends its great roots deep down into the hardest, driest soils, thus enabling it to withstand severe drouths as no other plant can. This gives it great value as a fertilizer; and growing as it does upon the hardest, poorest soils, it recommends itself for reclaiming soils too poor for raising other crops. It has a habit of taking possession of vacant lots and roadsides, which has caused some alarm with those unacquainted with its habits, fearing it would spread over the fields and prove a pest. I can assure you it will do no such thing. In all of my acquaintance with it I have never seen it spread into cultivated or occupied fields to any extent. I have been very reckless with the seed about my own premises; and if there had been any danger in that direction I should have found it out long ago.

Some time during the latter part of last summer I made a trip thru a part of the State where a severe drouth prevailed. The cattle and sheep lookt gaunt and hungry, and were roaming over pastures that were dry, scorcht and dead. Fire had run over the farms here and there, adding still further to the look of desolation. In places the cows had been turned into the growing corn, the only green forage in sight. I wondered again and again how it was possible for the stock to escape entire starvation. A field of sweet clover, with its dark green foliage, would have made a refreshing picture amidst this desolation. It would have been more than a picture. It would have supplied a place where it would have been most heartily welcomed and appreciated in this trying emergency. I think it will recommend itself and come to be appreciated soon in times of severe drouth.

It makes a slender growth the first year. It is this crop that is the most valuable for hay, and cutting it will not interfere with the second year's growth. The second year it grows coarser; blossoms, seeds and dies root and branch. If cut for hay in the second year it should be cut just as it is beginning to bloom. A second crop may be cut late in the season. It should be well dried, and it requires good weather to do it in. If cut for seed, it may be thrasht and hulled with a machine, like red clover, or the seed may be sown without hulling.

Now don't be induced by the bright picture I have drawn, to seed your whole farm to sweet clover, for it would result in an unprofitable failure, I am sure. But if you desire to test its value, do it on a small scale, with an acre or two, and do it thoroly. I have found it no easy thing to succeed in making it grow as a field crop, and I would advise sparing no pains in getting it started. When once it gets possession of the ground it will stay, if allowed to ripen a late crop of seed. Sow with winter wheat, or rye in the spring, the same as other clover.—Gleanings in Bee-Culture.

Huron Co., Ohio.

A Few Wisconsin Notes and Comments.

BY B. T. DAVENPORT.

HAVING been a reader and lover of the valuable American Bee Journal almost constantly since back in the seventies, I thought it about time for me "to arise" again, like Doolittle's man, and speak.

There is usually about a carload of comb honey produced in this section, but so far there has been but very little gathered this season. Clover bloomed profusely, smelled very sweet, and was covered with bees, but only a very small amount was stored from it.

Basswood bloomed quite well, but yielded no honey; bees workt on it, but not early in the morning as they will when it yields honey well.

If we have favorable weather the rest of the season we expect to get a fair crop of fall honey. My out-apiary, which is about five miles from home, is in reach of considerable buckwheat and any quantity of golden-rod. Those bees are doing better than the ones at home.

QUEEN-MOTHER AND DAUGHTER ON SAME FRAME.

I saw something this summer that I never happened to observe before in my 24 years' experience in keeping bees, and that was an old queen and her devoted daughter, both on the same frame, and the daughter fertile, too.

LEVELING SECTION COMBS.

As it may be a help to some of the novices I will describe my way of leveling combs: If done in warm weather, take a pail of cold water (put in a chunk of ice if you have it), dip the sections in, or better, put one in as you take one out, so the comb will get cold and brittle. Shake most of the water from them when you take them out, then you can scrape them down very rapidly with a knife. Another advantage in doing this is, that should there be any candied honey in the sections the water will soak it up so that if the sections are given to the bees at once they can readily clean it all out. I am seldom able to extract my unfinisht sections until winter, thus the candied honey in some of them.

STARTING SWEET CLOVER ON HIGH, SANDY GROUND.

Now I will be very grateful to Dr. Miller, or any other reader of the "Old Reliable" instructor, if he or she can tell me how I can get sweet clover started on a high piece of sandy ground. I have sowed seed on the piece twice, both times in the spring, once with rye and Alsike clover, and the result is only a few scattering patches and stalks, but what there is is very thrifty, standing four to seven feet high.

BASSWOODS DESTROYED BY SUNSCALD AND BORERS.

I have set out from 25 to 50 basswood trees annually for several years; they usually leaf out all right, but I lose a great many during the hot months with sunscald and borers. Perhaps wrapping them with paper or cloth would be an advantage, or even white-washing them; but I would not advise using tarred paper, as that would draw and absorb the sun's rays too much.

Well, I have had to stop twice while writing this short article, and take care of swarms even at this late date—Aug. 11.

One inch of rain fell this morning, which was much needed by vegetation. I think it will cause buckwheat to secrete honey faster, as we get but little from it here when very dry.

Waushara Co., Wis., Aug. 11.

Introducing Queens—Empty Combs, Etc.

BY EDWIN BEVINS.

AFTER trying many ways of introducing queens, I have settled upon the following as the easiest and safest under ordinary circumstances:

Take a frame of hatching brood (there need not be much of the brood left in the cells) and place it in an empty hive over the queenless bees with a frame the size of the hive, having wire-cloth nailed to both sides of it between the two hives. The thickness of the frame is not of much consequence. I use one about an inch in thickness, and have used others two or three inches thick. I have introduced a number of queens this way without a loss.

WHAT TO DO WITH EMPTY COMBS IN SPRING.

At the close of the last cold spell of weather in April, I found myself in about the same condition "Hoosier" was in as indicated by his question to the senator's answered in the June 8th issue of the American Bee Journal. Like him I had about 200 empty combs, and like him I was intending to work my bees mainly for comb honey. But the possession of these combs changed my plans somewhat. The answers of the senators came too late to be of much benefit to me this season, as I had disposed of a part of the combs and decided on how I would dispose of the rest. But I will here say that I believe they covered the ground more completely and satisfactorily than any other patch of ground has recently been covered by them in the apicultural field.

Mr. Abbott, I think, will take it kindly if I question him a little with reference to his answer. He tells Hoosier to hive swarms on his empty combs. Would Mr. Abbott do this if Hoosier's object was to get all the white honey possible in the surplus cases?

Mr. Hutchinson, in "Advanced Bee-Culture," says he tried hiving swarms on frames of drawn comb, and gave it up because he could get better results from hiving on frames with starters of comb foundation. But conditions have changed since Mr. Hutchinson wrote. The difference between a pound of honey and a pound of granulated sugar has narrowed so much that it is hardly worth while to work for the greatest possible amount of surplus honey at the risk of having to feed a portion of it back to the bees in the shape of granulated sugar.

There is another question: Would Mr. Abbott use these combs from dead colonies to hive swarms on before they had been cleaned up by the bees of other colonies? In my baby days of bee-keeping I used some that had not been cleaned, with disastrous results. But Mr. Abbott, no doubt, considers that a man who has kept bees long enough to have 200 frames of comb from colonies that died in winter knows enough to have them cleaned before hiving swarms on them. You need not say a word, Mr. Abbott; your answer is just as good as that of any of the other senators.

A word as to the way I disposed of my combs: I made beeswax of the crooked ones, and those that were wholly or largely drone-comb. Then I put hives full of the balance over, or under, as many of the strongest colonies in the yard. When the time arrived to put supers on I took them away. If any had brood in them I gave most of it to the colony, leaving enough of the youngest for a nucleus, and either gave the nucleus a queen or allowed it to rear a queen. Some of these nuclei reared fine-looking queens, but doubtless some will say that they will not be so long-lived as queens reared under other conditions.

There were some colonies in the yard too weak to do much in the sections during the white honey-flow, but likely to get strong enough to store some honey later. Over these I put hives full of combs to be left on to the end of the season. Then I will supersede these lazy or failing queens.

Then, I hived swarms on some of the combs as advised by Mr. Abbott and others. All such work will be done by the man who wants increase. The man who wants no increase will find ways enough suggested by the senators to help him out of all embarrassment.

It is a significant fact that eight-tenths of my empty combs are of the size used in the dovetailed hive. My losses in hives taking deeper frames were due to the loss of queens and not to lack of stores. I have bees in some 8-frame hives, 12 inches deep, and these have had no attention from me except to spread the brood in some of them, and put on supers. The hive just mentioned seems to be a better hive to winter bees in than the 10-frame Langstroth. I lost some colonies in these in April.

My opinion of the 8 and 10 frame Langstroth hives for wintering, as exprest in a former article, needs a large revision. Colonies in them which at my second examination I felt sure had honey enough to carry them to fruit-bloom, went down at a fearful rate during that last cold spell in April. If such winters as the last were frequent, I should abandon the use of such hives, or abandon out-door wintering. It cannot be denied that the frames of these hives are of a very convenient size to handle. Feeding sugar syrup to bees is a disagreeable business, but with the Langstroth frame it becomes a necessity. If I continue to use the 8 and 10 frame Langstroth hives I shall think seriously of providing frames of honey to be given the bees when needed. To provide these frames takes from the resources of your own fields. Therefore, it would seem to be the part of wisdom to get them produced in somebody else's field, or, better yet, in some field not yet occupied.

IT WAS A MEANINGLESS QUESTION.

In my article on pages 308 and 309, the types made me ask a meaningless question. I askt, or intended to ask, if it would not be well for those who think they must use hives of standard depth, to make a compromise by using the 10-frame hive, and contract to 8 frames during the honey-flow. I was made to ask them if it would not be well to make a compromise by using the 10-frame hive during the flow. This would be no compromise at all.

THE NECTAR IN THE FLOWER-CUPS.

The theory of Mr. Bates that the better portions of the nectar settle to the bottoms of the flower-cups has received its death-blow, it seems to me, at the hands of Mr. Norton. I will only add that even if this separation were possible, it would be so slow, and the time for the accumulation of the nectar in sufficient quantity to make a separation possible so short between the visits of the bees that there cannot possibly be a separation that will enable the longer-tongued Italians to store a quality of honey that will be perceptibly better than that of the shorter-tongued blacks.

Mr. Allen, on page 340, says there is no difference between the honey of Italians, blacks, and Carniolans, when capt over before extracting. Has he observed any difference at any time, and under any conditions?

Decatur Co., Iowa.

Selling Honey for Cash or on Commission—How to Avoid Being "Taken In" by Honey-Sharks.

BY ERNEST R. ROOT.

NEARLY every year, or during the latter part of it at least, there are usually quite a number of bee-keepers who complain that they have been unfairly treated by commission houses or honey-buyers. In some cases, at least, the trouble is wholly with the bee-keeper. His honey is improperly put up, breaks down in transit, and in the end the commission man is blamed. There are a few expert bee-keepers who know exactly how to put up their honey, and how to put it on the market without running risks. But there are many more, in spite of all that has been said, who make serious mistakes, greatly to their financial detriment.

In the first place, let me say that there is a vast difference in the *legal responsibility* of an actual *buyer* and a *commission house*. If you ship your honey to an irresponsible purchaser, and he fails to make you returns, you are helpless. If he is worth anything, on the other hand, you can sue him for the full amount of your claim. A commission house, on the other hand, if it takes your honey, takes it in trust. You will be obliged to pay freight, cartage, and assume all risk in shipment. If the honey is broken down in transit, the commission man (if one of the sharpers or skinflint class) may make out its condition a great deal worse than it is, sell it at a certain figure, and represent to you that it sold at a good deal lower figure. He will not only steal the difference between his actual selling price and the price represented to you, but will charge up (which he has a right to do) with freight, drayage, and his 10-per-cent commission. Altho you may be pretty well *satisfied* that he has actually robbed you, unless you can *prove* it you have no recourse in law.

The nicest way to dispose of honey is to sell it for cash to a responsible, honorable firm. In 30 days' time you will get returns for the full amount of your bill. But if the buyer is irresponsible, and especially if he is dishonest, look out. I would rather deal with an irresponsible commission house than with an irresponsible buyer. The former will be compelled to render you *some* sort of returns, while the latter can simply say in effect, "What are you going to do about it?" If you sue him you will be running up attorney fees, without any show of returns; but the commission man *must* render you some sort of statement, and remit according to that statement, or go to jail for having taken your property in trust. He has no right to confiscate it; but, as I stated, he may make a false report, and render you only a small percentage of the actual amount he received for the honey.

In the first place, then, investigate the responsibility of either a commission house or of a buyer, as the case may be.

But suppose you get a good offer, and do not really know the firm, and your banker does not. Or, suppose you haven't time to write, and that, to all appearances, the firm is straight, and you desire to close the deal. Ship the honey to your own name to the point of destination, and attach a draft (your banker can do this for you) to the bill of lading, sending both to some bank at the place where the honey is shipt. This bank will, for a very small fee, collect the money, turn over the bill of lading, and the honey to the actual purchaser.

But suppose there is no bank in your vicinity, and you wish to make yourself safe. Consign your honey as before to your own name at the point of destination, and then request your agent to express (if you mail it, that relieves the express company of all liability) the bill of lading to the agent at the other end of the route. The latter, as agent for the express company, will collect the money, and deliver

the honey and the bill of lading. Money will be forwarded to your agent, when, by paying a small fee, you can take the whole amount of the cash.

Again: Look out for any firm that makes quotations away above the general market figures. These high prices are put out as baits. You ship to the house, and as soon as the honey is in its hands it will report that the "market has suddenly declined," or that your "honey is of poor quality," or that it was "broken in transit," and after a little the house will advise you that the honey was sold for, say, a half what you expected to get for it—may be a good deal less. The concern will be obliged to remit to you according to that report, after deducting freight, drayage and commission. If you expect to get 15 cents for your honey, you will probably get in cash somewhere about 4 or 5. This thing has been done over and over again—so much so that I feel it is necessary to warn our readers thoroly.

Still, again, it is a bad plan to ship to a commission house, even tho it is quoted at thousands of dollars, and its honor is above the average, if such house does not make a *specialty* of handling honey. It cannot begin to do as well for you as some firm that makes honey a business.

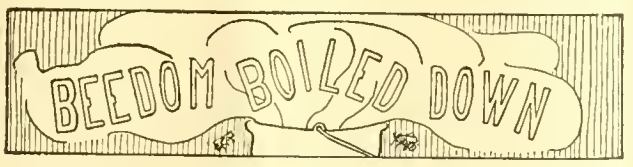
HOME-MADE SHIPPING-CASES.

I have several times spoken of the folly of trying to put otherwise nice comb honey into poorly constructed or home-made shipping-cases. I know just how our honey-buyers and commission men regard these poor, miserable, clap-trap affairs made at the "ordinary planing-mills around home." A member of a honey firm in Chicago pointed to me a nice lot of honey put up in home-made cases. Said he, "If it had been put up in no-drip shipping-cases of the modern style, the honey would have brought two cents more per pound." The cases he pointed to me held 24 sections each. This would have made a difference of nearly 50 cents per case, and yet I venture to say the penny-wise-and-pound-foolish bee-keeper thought that, because he was saving one or two cents on the factory-made cases, he was just so much ahead.

Various commission houses in Albany and New York city, Philadelphia and Columbus, emphasized the importance of neat, attractive cases, and in this day of fancy goods and close competition, it would seem as if it should be unnecessary to speak of this.

A PLEA FOR THE COMMISSION MAN.

In the foregoing I may have given the impression that nearly all commission houses are "up to the tricks of the trade;" but that, I am pleased to say, is not the fact. In several cases we have investigated we found the trouble was either due to a lack of experience or because the bee-keeper himself was desirous of getting the "lion's share." The dishonesty is not always on the side of the commission man. The difficulties, when they do come up, however, are mainly those that are the result of inexperience on the part of the bee-keeper, and ignorance of the ordinary methods of doing business—yes, ignorance of the simple principles enunciated above.—Gleanings in Bee-Culture.



Paste for Labeling Tin.—Put a small quantity of glue broken in small pieces, enough to cover the bottom of a tin vessel with sufficient water to cover it; when the glue has become quite soft fill up to about three inches deep with vinegar; put on the fire to boil, and when all the glue is dissolved add flour until it is thick enough to form a paste—not so stiff as to cut it but so that it will just run. This is said to stick tight to tins, and will not peel off in dry weather.—Australian Bee-Keeper.

Feeding Back to Finish up Sections.—F. Greiner talks about it in Gleanings in Bee-Culture. The best time for such work is when it is hot with hot nights. But his time for feeding back comes about Sept. 1. By way of experiment he has built a little bee-house, double-walled and packt, to hold six colonies. A kerosene lamp holds the temperature at 90°, sometimes not being needed in day-time. Colonies are selected which were working well at the close of harvest. A contracted brood-chamber is used, preferably a half-story hive. Mr. Greiner says:

"Each colony may be given two or three supers of unfinisht sections at one time, and a Miller feeder placed on top. This, of course, must be kept filled with diluted honey, which, being kept warm by the heating apparatus, is thus always in good condition to be taken by the bees. Sometimes I feed at the entrance also—not by an entrance-feeder, but by piling up at the entrance sections not containing honey enough to justify me in returning to the hive for finishing. All sealed patches must be unsealed, or scratcht with an uncapping-comb—an instrument that might well be offered for sale. When the weather is warm enough all honey will generally be removed from the sections during the night. In cold nights it does not work so well, and the bee-keeper must not fail to remove the sections from the entrance early in the morning, or trouble and robbing may be the result."

Black Drops from the Smoker.—F. L. Thompson says in the Progressive Bee-Keeper:

"Some time ago a questioner in the American Bee Journal complained that his smoker dropt inky-looking stuff on his nice white sections when smoking the bees out. Dr. Miller advised him to clean his smoker. I happened to have just cleaned my smoker when I read that, and went out in the yard and smoked a few hives, and that black stuff dript around more copiously than I ever knew it to do before."

Size of Hives.—This topic is still to the fore in Gleanings in Bee-Culture. S. A. Niver says that for their buckwheat locality the late Mr. Morton settled upon a 9-frame hive containing 8 frames and a dummy. Mr. Niver wants bees to *swarm*, on this account preferring 8 frames and Carniolans, so that when buckwheat comes there will be plenty of bees instead of having the queen crowded out of the brood-nest by honey stored there earlier. A. N. Draper, working for extracted honey, wants *big* colonies, and if he wants to move an apiary in summer to get an extra flow of honey, it is easier to move a "barn" than two smaller hives. With the barns there is no trouble sorting out frames to extract. The queen need not go out of the brood-chamber to lay, and no frame from the brood-chamber ever goes into the extractor. As a sort of summing up, the editor of Gleanings in Bee-Culture says:

"As the evidence begins to pile in, pro and con, on this subject, it seems light is surely breaking. From all that has been said, if I can interpret correctly from the reports, it would appear that for northern localities the 8-frame capacity is about the right size when running for comb honey; and it does not matter whether that is in the shape of an 8-frame Langstroth or Danzenbaker 10-frame or two Heddon 8-frame brood-chambers, all three being of about the same capacity. For other localities, and particularly in the South, a larger hive seems to be better for the production of extracted honey. Some think a 10-frame Langstroth is quite large enough. Others, like Mr. Draper and the Dadants, believe that a 10-frame Quinby, or what has recently been introduced as the Draper barn, is the thing.

"It was O. O. Poppleton, one of the most careful and conservative bee-keepers there is in the whole land—one who has produced honey in Illinois and Florida both by the ton and by the carload—who says that a comb-honey hive cannot also be a good extracting one, or something to that effect; that the one designed for liquid honey should have a large capacity, and that for comb smaller, so that this question of large and small hives, after all, simmers itself down to a matter of locality and condition of market. If there is more money in producing extracted honey, then it is folly to produce comb; and one should study well his locality, and then decide on the style of hive.

"It is P. H. Elwood who began with the Hetherington-Quinby, 10 of which frames would make a very large hive, and now I believe he uses only five or six such frames in the production of comb honey. These would give an equivalent capacity, if I am not mistaken, of an ordinary 8-frame Langstroth. On the other hand, the Dadants started with a Quinby, pure and simple, and they have been producing extracted honey, and have continued along with the original Quinby, 9 and 10 frames."

The Premiums offered on page 557 are well worth working for. Look at them.

THE AFTERTHOUGHT

The "Old Reliable" seen through New and Unreliable Glasses.
By "COGITATOR."

APIS MELLIFERA IS HER NAME.

When Ann and Horatio went to be married,
Approaching the altar they luckily tarried—
And some one found out that her name was not right:
'Twas Anna, not Ann, on her baptismal night—
Ho's—Anna ! !

'Spects we also shall have to hosanna the chap who first found out that the honey-bee—her name—is not Apis mellifica, but Apis mellifera. We've used the wrong name for a good part of a lifetime (without realizing how much we were losing by it), but let's have it right if it takes a leg. Some time about the dawn of the 21st century we'll get to the end of these abominable, and seemingly useless, changes of scientific names. See Editorial Comments, page 456.

MISS PICKARD PERHAPS THE PICK OF THE PILE.

I suspect Miss Pickard is right, that the latter half of this century has seen more development of apiculture than all the centuries gone before. Many daughters have done —apiculturally—but in keeping 111 colonies of bees *at an out-apiary* she rather seems to lead them a lap or two. Page 449.

THE DADANT QUINTET.

And the opening picture, page 465, is one of the very best we have had lately—two men who look as if they were going to smile, and three boys, to whom as yet life is too earnest to smile at. Altho we can't always look very deeply into boys' hearts by looking at their faces, it looks as if the Dadants had lawful rights to a quietly proud smile.

THE DEAD BROOD MYSTERY.

That California dead brood, which isn't foul brood, must be quite a recondite mystery if Prof. Cook, after several years of experience with it, can't tell for sure whether it is starvation or not. I'll say off hand (like other folks who don't know what they're talking about) that it isn't starvation. Short rations help it on, or perhaps hinder the bees from resisting it successfully (same thing in regard to foul brood exactly), but starvation is not going to kill any considerable of brood after they are capt over. Page 450.

Hello ! here seems to be the same thing in Minnesota, as told on page 518.

ISLAND-REARED QUEENS AND RATTLESNAKES.

And so Rambler has little inclination toward island-reared queens. Page 451. I merely wonder why they don't come in vogue. Or does in-breeding do more harm than purity can possibly do of good ? And Rambler also speaks as if rattlesnakes were unusually plenty this year with him. I wonder if there is such a thing as a general rattlesnake revival. Here for many years there were none. The local wise man said ash leaves kept them away. (Plenty not far distant.) Then again for many years, beginning not far from 1860, rattlesnakes were disagreeably plenty. Then again for a good many years there were few or none. This year we have rattlesnakes again.

GLUCOSE MIXTURE AND POOR HONEY.

From Herman Moore's excellent essay, page 454, I will repeat again this telling sentence: "The sale of a pound of mixture (glucose and something else) has defrauded the honest apiarist out of the market for *ten* pounds of genuine honey." And Tater would add that the apiarist may also commit the same fraud upon himself by selling a pound of honey which, altho genuine, is *poor*.

MY ENEMY, THE HONEY-BARREL.

I must try to be fair with my enemy, the honey-barrel; and if Editor Hill, page 458, has shipt several carloads of honey in cans, and several in barrels, and the cans lost the most by leakage, I'll say it surprises me, and possibly I ought to be more than surprised—reconstructed. However, if the leakage on all the lots was but a trifle, the significance of the experience would be small after all. Guess I'll remain among the hostiles, and read that editorial on page 473 some more, until I hear from some other fellow.

ITALIANS STILL "GRIP" THE MAJORITY.

On the question whether to Italianize or not (for honey alone) the 30 senators at present count out: For keeping the blacks, 3; for hybrids, 3; on the fence, 2; for Italianizing, 22. Some of us have been thinking that the Italian was losing its grip, but this doesn't look like it. Page 459.

A CHANCE TO POP INTO POPPY-LORE.

Dr. Peiro's bees are only like everybody else's bees when they revel in the poppies, and seemingly wish they could devour them completely. Page 461. Here's a not-yet-taken chance for somebody to find out something. We don't expect bees to get very enthusiastic about pollen merely; and these don't hold still enough to be after honey; and opium-eaters (at least human opium-eaters) are languid in their manifestations.

ODOR OF NAPHTHALINE FOR FOUL BROOD.

Odor of naphthaline *always present in the hive* for foul brood. Worth thinking of for very badly infected locations. Editor Cowan, page 468. Does not *kill* anything, but prevents development.

A COMMENT ON THE PROGRESSIVE SERMON.

And what shall I say about the progress sermon of L. J. Templin, page 468? Good. But we hear it pretty often, for one thing. Guess it's mostly so, that when a man can no longer progress, nor even cheerfully let other people, it's a good thing for Death to come along. One thing he didn't tell us about is the common and pestilent chap who wants the multiplication-table to progress also—or at least divers other things which have reacht, or nearly reacht, the ultimatum. We are all in danger of forgetting, in this progressive whirl, that there is any such thing as ultimate truth.

PROGRESSING UPSIDE DOWN.

Yes, here it is again; those young Wisconsin bees, page 470, have got the Modern Progress; and so, of course, they must stand t'other end up in the cells from what old-fogy young bees do. If their human prototypes could only get themselves somewhere where they could never gnaw out—it might not be so well with them, but it would be better for the rest of us.

A CASE OF OUTSIDE IN THE INSIDE.

My ears prickt up like those of an interested rabbit, at the succulent and queer new idea of setting frames of young brood at the *outside* of the hives. Page 471. Badly taken in. It means outside in the inside, not in back beside the outside.

QUEENS REARED BY A QUEENLESS COLONY.

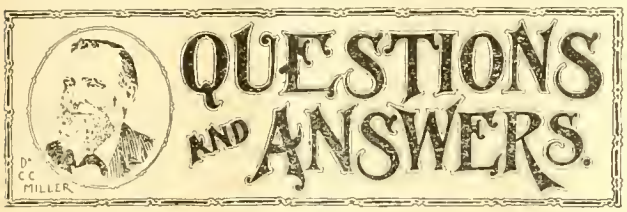
Dr. Miller's reasoning, quoted page 471, strikes me as very good, and also important. That when a full colony suddenly becomes queenless they will rear a lot of poor queens from too-old larvæ, *but not at first*. Let them sweetly and entirely alone, and they'll come out with a good queen. Poor ones reared later because at that time they have only too-old larvæ, and they have queens "on the brain" too much to stop with the first batch.

And the reproof of Dr. Miller for assuming equal standing with one who had reared queens by the thousand seems to me a little too strong. Mr. Hutchinson says he used the method *a year or two*. Pin that down, and it might be that he reared his first year's queens that way, and a few the second year—hardly into the thousands as a beginner in the queen market—and the *years* are too few. Bees are versatile creatures, and the conditions under which they work are variable also, and therefore it takes experience spread over many years to be anything like sure on such a question as whether they will start more queen-cells the second, third and fourth days—more than possible that there is both a red side and a blue side to the shield. A queen-breeder is apt to rush the season; a honey-producer is more apt to see bees in entirely normal conditions. Started a little too early, and with colonies not quite strong enough, and what Mr. Hutchinson narrates is not far from what I should expect. I'm not *sure* of my ground, but have a decided impression at least, that in a honey-flow, with the colony uproariously strong, and multitudes of eggs and brood in all stages, they sometimes don't start cells at all for a day or two—instead of all the first day, as Mr. H. gen-

erally saw. In case the first queen goes out with a swarm, it will be another first-day queen just as good that will step into her shoes, I think. Of course, I'm not advising *queen-breeders* to rear their cells any such way.

BEESWAX IN A SACK AN "OUGHT-TO-BE."

But you're right, dear prince of York, that beeswax in a sack ought to be as cheaply carried as the same in a box. Page 472. Alas, the calmness of a railway magnate when stung by "ought-to be(e)s" is greater than we-uns can attain to under the stings of Apis bees! COGITATOR.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Blacks with a Touch of Yellow—Naming Plants.

A correspondent sends some worker-bees, and asks whether they are blacks or what. As they differ in appearance from blacks only in showing a very small touch of yellow, the probability is that they are black with a very little Italian blood.

A plant is also sent upon which bees were working freely. It has peculiar seed-balls, entirely spherical, but I don't know the plant. It isn't the Chapman honey-plant, which also has globular balls, but much larger. Please don't send plants to me for identification, but send them to Prof. C. L. Walton, 2863 N. Ashland Ave., Chicago, Ill., who will then name them in this journal. C. C. MILLER.

Bees Hanging Out—Winter Stores—Queens in Uniting.

1. A cluster forms every eve at the entrance of one of my hives. I have rained water, whipt, scolded, etc., yet they remain there. Is there no danger of their suffocating those inside? If so, what is best to do with them?

2. All the authorities say that for successful wintering of bees, good, pure honey is one of the great essentials. Now, how is a beginner to know good from bad, when all the combs are sealed up in the fall of the year?

3. I have two weak colonies, and wish to unite them. In doing so I desire to keep the best queen, but this is what I don't know, unless it is in the survival of the fittest. My inquiry is this: Is the best queen always the winner in the royal fight? NEW BRUNSWICK.

ANSWERS.—1. If on a hot afternoon you were to come outside the door to sit in a more comfortable place on a shady veranda, and some one should turn the hose on you to drive you in, you wouldn't like it. Very likely the bees don't like the way you treat them when you try to drive them in. Don't you worry about that cluster at the door suffocating the others. They'll manage that all right. If you want to do anything to help them, give more chance for air to get into the hive by way of a larger entrance. If you raise the hive and put under each corner a block half an inch to an inch thick, you will find the cluster at the entrance disappear, not as suddenly as when you rain water on them, but the effect will be more permanent.

2. It isn't always easy to know, but you can make a pretty good guess at it. If, as you say, all stores are sealed up, that's one element strongly in their favor, for thin, watery honey is not the right thing for winter, even if from the best sources. There's no law against your breaking open a few cells and examining the honey. If it's honey that you think you'd like to eat, you may be pretty sure it's all right for the bees. If it's black, disagreeably tasting stuff, it's likely honey-dew, and not all right. But if the beginner is wise, he'll not wait till the winter stores are all sealed, for it will be unwise late in the fall to try to apply any remedy, but he will know in August or early September the character of the stores for winter. In most localities it is so seldom that winter stores are bad that it may be about as well for the beginner not to trouble his head about it.

3. Generally there will be a survival of the fittest, but not always. When two young queens fight, the contest is one of personal strength. Not so when you unite two colonies with laying queens. In such a case it's more a question of the strength of the two colonies. If you unite with a fairly strong colony having a poor black queen a weak nucleus with a choice Italian queen, you will do well to kill the black queen at least two or three days before uniting, if you don't want the Italian killed. Under ordinary circumstances you may leave the matter to the bees, for the stronger colony is likely to have the better queen; or perhaps it might better be said that the better queen is likely to have the stronger colony.

Sowing Sweet Clover and Cleome.

1. How much sweet clover seed does it take to sow half an acre?

2. How much of the cleome, or rocky mountain bee-plant, does it take to sow half an acre? I have read that it should be sowed in the fall. About what month would be the best?

3. Can I sow the sweet clover along with the cleome? IOWA.

ANSWERS.—1. Perhaps a peck of sweet clover seed would do well for half an acre. A good deal more than that would do no harm, and less might do as well. If sown thin it spreads out, but if sown too thin there is danger that vacancies may be left where seed misses.

2. I don't know about cleome, and perhaps some one who does know will help out.

Management at Swarming—Field-Peas—Overstocking—Requeening—Water-Melon Juice.

1. What makes the entrance of a hive turn yellow at this time of year?

2. How will it do, in swarming-time, to move the old hive to a new place and set the empty hive on the old stand, where increase and honey are wanted? Will the old colony store enough to winter on?

3. Do bees get honey from stock peas, that is, field-peas? They work heavy on them.

4. There is something over 400 colonies of bees here on four miles square. Is that too many for one locality?

5. Would it be safe to let the bees do their own requeening, or would it be best to do it for them?

6. Will water-melon juice injure bees? Or will it produce honey? TENNESSEE.

ANSWERS.—1. I don't know. I might say it is because the entrance is not large enough, but that would not be fairly answering the question. At certain times, whether it is from the flowers on which they work, or whether the color is produced by themselves, they will give a decidedly yellow color to a piece of clean pine with which they come in contact, especially where they try to get thru a crack, or where the entrance is rather small. If an entrance is abundantly large, you are not so likely to see it made yellow.

2. The plan is all right. The mother colony is likely to have enough for winter, especially as it already had a good store of provisions when it swarmed.

3. I think they do. Either honey or pollen must be got, or they would not work on them. Watch them when at work, and if you find that some of them do not gather pollen you may be sure they are getting honey.

4. That depends upon the location. There may, and there may not, be plenty of pasturage for all. In some places ten times as many bees would be supported on a square mile as in others.

5. Unless a great deal of wisdom is used in the matter it is probably best to leave the matter of requeening to the bees.

6. The juice of melons is not likely to hurt the bees, but I don't know the quality of honey that would be stored from it.

GEORGE W. YORK, Editor.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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Place and Date of Next Meeting:

IN FRANKLIN INSTITUTE,
15 South 7th Street, between Market and Chestnut Sts., Philadelphia, Pa., September 5, 6 and 7, 1899. Every bee-keeper is invited.

VOL. 39. AUGUST 31, 1899. NO. 35.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Sweet Clover Article, by H. R. Boardman, on another page, will well repay a close reading. From now on until cold weather is perhaps the best of all times to sow sweet clover seed, as the ripe seed that drops from the growing clover in the fall rarely fails to germinate. As we have said before in these columns, had it not been for sweet clover many bee-keepers would have no honey at all in this year of only a partial crop in numerous localities.

The Advice to Honey-Shippers, by Editor Root, on another page, should be read and remembered. If heeded, it may save thousands of dollars to bee-keepers. In the world are many people who are trying to get something for nothing, or get it fraudulently, and it behooves all who have anything to dispose of, to see that they are dealing with honest and upright business firms. There are plenty of the right kind to do all the business that needs to be done.

We endeavor to give annually, in these columns, about the same suggestions as Editor Root has given, but he has done it so fully and so well, that we concluded it would be best to reproduce the principal portion of what he wrote on this important subject.

Honey will be worth money this year, if we may judge from the general poor crop reports that have come in. It is already bringing good prices, and those who have any to sell will be paid well for bee-work this year. By some, who have had large experience, it is thought that honey prices will not likely go much higher, so if you can get a fair price for your honey now it may be well to dispose of it, rather than risk waiting for higher prices.

After Chicago Adulterated Honey. It will be news to practically all of our readers when we announce that an attempt was made awhile ago to stop the sale of adulterated honey in this city.

The latter part of last April, upon receipt of instructions from the United States Bee-Keepers' Association to go ahead in the honey-adulteration cases, Attorney Herman F. Moore (who was employed by the Association) and the editor of the American Bee Journal proceeded at once to collect samples of suspicious honey for purposes of prosecution. Nine samples were selected from the dozen or more procured, on recommendation of Chemist E. N. Eaton, as being clearly adulterated with glucose.

Out of the nine, five were taken, and a complete chemical analysis made for use in court. Upon the advice of the State's attorney's office, the cases were to be taken before a justice of the peace, and Justice W. T. Hall was selected. Assistant State's Attorney, Fred L. Fake, was detailed to assist Mr. Moore in preparing the evidence and conducting the trials; the intention being to try one case at a time, and follow up with the remaining four if successful in the first.

Acting on the suggestions from the State's attorney's office, criminal proceedings were begun July 1, against Nelson N. Blood, 448 W. Lake St., the complaint being made by the editor of the American Bee Journal, who, accompanied by Mr. Moore, had purchast the alleged honey from Mr. Blood himself.

July 3, Mr. Blood was arrested, and gave bonds in $200 for his appearance July 10 for trial.

July 10 the case of the People vs. Blood came up for trial, and testimony was given by the writer, Mr. Moore, and Chemist Eaton, for the people, and by Mr. Blood in his own defense. The latter testified that he did not know it was not honey; that he had bought it from Weber Bros. (wholesale grocers), who had sold it to him for honey; that he did not know anything about it.

The case was continued for evidence and argument several times. In the meantime Mr. Moore and the writer called on Weber Bros., and subpœnaed Chas. Weber, after questioning him closely. The subpœna ordered him to produce in court the records, books, papers and bills relating to his last three sales of honey to Mr. Blood previous to June 4, 1899, being the next day after we purchast the jar of so-called honey at Mr. Blood's store. On the further hearing, Mr. Weber testified that he had tasted the stuff, and considered it good honey; that he had purchast it from Randall & Co., a commission firm on South Water street. All of Mr. Weber's testimony indicated that he was working in the interest of his customer (Mr. Blood), so nothing of value was gained from him that would aid us except, possibly, that we learned who did the adulterating.

July 20, the arguments were completed, and Justice Hall made his decision, discharging the prisoner. This was indeed discouraging to the prosecution, as we all (including the State's attorney) felt that under the law we had clearly earned a favorable judgment, and according to the facts as presented in the case. How Justice Hall could render such a decision, in view of the evidence and the law, was, and is yet, a great surprise to us.

The turning-point possibly was this: The law says, No man shall be punisht who shows to the court or jury that he could not with *reasonable diligence* have known that he was violating the law. Mr. Blood did not testify that

he even *tasted* the stuff he sold for honey. He testified to *nothing else* that showed *diligence*, small or great. He showed *no* diligence. The law requires *reasonable diligence*. But Justice Hall seemed not to take any notice of this feature of the law, tho he exprest himself, when invited to taste the stuff bought from Blood for honey, that he had no doubt it was bogus.

Now, while it would appear that the United States Bee-Keepers' Association met with rather a discouraging defeat in its first attempt to enforce an anti-adulteration law, we are not sure but what a good deal was gained for the cause of pure honey in Chicago, after all. Before Justice Hall rendered his final decision, it was noticed that the honey adulterators had wisely taken the hint, and there appeared the additional word "Imitation" on the labels of their mixture of a good deal of glucose with a little honey, thus correctly renaming it "Imitation Honey."

Besides the above advantage gained, we think the adulterators will not find such a great demand for their compound hereafter, as the consuming public were made aware of the prevalence of the bogus article thru the notices in the newpapers of the attempt to enforce the anti-adulteration law of Illinois. For instance, here is what appeared in the Daily News preceding the trial before Justice Hall:

Bee-Keepers Cause an Arrest.

THEY START TO STAMP OUT HONEY MADE OF GLUCOSE.

The efforts of the national, State and local bee-keepers' associations to stamp out the practice of adulterating liquid honey with glucose and other substitutes which are cheaper and more easily secured than the treasured sweetness of the bee, will assume tangible form on Monday, when Nelson N. Blood, a grocer at 448 West Lake street, will be arraigned before Justice Hall, charged with violating the pure-food laws.

Blood's arrest was brought about by Secretary H. F. Moore, of the local association, and ex-President George W. York of the national organization, and the prosecution will be conducted by Assistant State's Attorney F. L. Fake. In the course of an investigation begun last month a small jar of honey was purchast from the grocer, which, upon being analyzed, it is claimed, proved to be 90 percent glucose. At the same time similar purchases were made at other places, and five other prosecutions will be brought on the same charge.

The arrest of the West Side grocer was in line with the present activity of the bee-keepers. It is viewed largely as a test case, and said by them to be important, as one issue that is sure to come up is the question whether Blood knew he was selling an adulterated article. It is not claimed that he did, as his stock was purchast from a jobber, and bore no label of any kind. At any rate, the bee-keepers assert that Blood sold adulterated honey in violation of law, and are going to locate the responsibility. Whether the fight will be waged against the manufacturers and jobbers the bee-officials do not state, but such action is in line with their present activity.

The following was publisht in the Daily News of July 11, the day after the trial began:

Say Bee-Keepers are After Him.

GROCER BLOOD PROSECUTED ON CHARGE OF SELLING BOGUS HONEY.

N. N. Blood, a grocer at 448 West Lake street, was on trial before Justice Hall yesterday, charged with selling an imitation of honey. The complainants were Herman F. Moore and George W. York, representing the organized bee-keepers of America. During the hearing some very peculiar testimony was secured from the grocer and from other witnesses.

The first witness was Mr. York, who is the publisher of the American Bee Journal. His testimony, and also that of Mr. Moore, who is secretary and treasurer of the Chicago Bee-Keepers' Association, told of researches in the line of bogus honey, and especially of the finding of a particular kind of mixture in Blood's store.

E. N. Eaton, an expert chemist, was then called, and testified that the mixture in this jar was 90 percent glucose. After him came Blood, who said he did not know whether it was pure honey or not. Nicholas Schmitz, a salesman for Weber Bros., from whom Blood bought his honey, said that he was not accustomed to tell his customers whether they were getting honey or not. If they askt him about it he told them he did not know. He did not know whether his house kept pure honey or the adulterated article. After hearing these and other witnesses, Justice Hall continued the case until Friday afternoon.

The Chicago Record for July 15, contained this interesting item on the subject:

Say Honey is Not Genuine.

BEE-KEEPERS CHARGE A GROCER WITH SELLING AN IMITATION PRODUCT.

Justice Hall heard further evidence and a part of the arguments yesterday in the case of N. N. Blood, the grocer at 448 West Lake street, who is charged by officers of the Bee-Keepers' Association with having sold adulterated honey.

Herman F. Moore, secretary of the Association, testified that it was impossible to produce genuine honey at the price paid by Blood for the goods. According to Mr. Moore the grocer should have paid $1.25 or $1.30 for a dozen three-quarter pound jars, whereas Blood said that the goods had cost him 90 cents a dozen. Mr. Moore said:

"The retail price set on the honey—10 cents a jar—was less than any bee-keeper can afford to sell it for. If Blood has any knowledge of the grocery business, he ought to know that he could not obtain genuine honey at 90 cents a dozen."

Mr. Weber, a member of the firm of Weber Bros., the wholesale dealers who sold the honey to Blood, testified that the honey was bought as genuine by his house, and that his clerks were not allowed to misrepresent goods to customers. After hearing part of the argument of Attorney Fred L. Fake in behalf of the prosecution, Justice Hall adjourned the case to Tuesday at 3:30 p.m. sharp.

The final notice publisht by the Chicago Record, after Justice Hall rendered his decision, reads as follows:

GROCER BLOOD HELD BLAMELESS.—In the case of the Bee-Keepers' Association against N. N. Blood, a grocer at 448 West Lake street, Justice Hall yesterday held that Blood was not to blame for selling a substance labeled "honey." The justice attributed responsibility to the wholesale grocer from whom the goods were purchast.

A side-light on the subject of food adulteration came out while Mr. Moore and the writer were interviewing Weber Bros. They very kindly read to us an extract from a letter they had just written for the guidance of their salesmen. We were so pleased with the sentiments exprest, that we requested a copy of it, which follows:

CHICAGO, July 10, 1899.

PURE FOODS.—We believe the tendency of the buying public in the future will be in the direction of strictly pure foods—and in our opinion the result of this will undoubtedly prove highly beneficial to the health of the consuming public, and unquestionably more satisfactory to the jobber, retailer, and everybody concerned in selling this quality of goods. Adulterated articles in the food line are still on the market.....but we believe it will be to the best interests of all concerned to advocate the purchase of pure foods as speedily as possible. Unless you know it to be a positive fact that the article you are selling is absolutely pure, do not sell it as such. If you are in doubt, make it known that way. WEBER BROS.

It will be noticed that Weber Bros. wrote the above on July 10—*the very day* that their customer (Blood) had his trial for selling adulterated honey. There is no doubt at all, in our mind, that this case had a good influence upon Weber Bros., or they never would have written so strongly in favor of pure foods. Why, *we* couldn't possibly write a stronger paragraph on the subject. And yet, this same firm, a few days before, was selling glucose for honey! *Now* they label it "Imitation Honey."

Where is the bee-keeper who will say that nothing was gained in the interest of pure honey in this attempt to stop its adulteration in Chicago? We contend that the effort was worth all it cost, even if defeat was apparently the re-

sult. What is needed now, is to "move forward" again. It will pay to keep close after the sellers of adulterated honey until they cease entirely to offer the fraudulent stuff. We are in favor of the United States Bee-Keepers' Association continuing the good work; and we believe bee-keepers everywhere will rejoice in the opportunity to contribute their dollars to push this war till every honey adulterator, and also sellers of the mixture, are put where they can't defraud innocent consumers.

The Country's Honey Crop.—An editorial in Gleanings in Bee-Culture for Aug. 15, reads as follows:

"Since our last, reports give a little better showing. Indeed, it begins to appear as if there were some bee-keepers, and even some States, where a fair crop of honey has been secured. Missouri, generally speaking, has had a good yield. Wisconsin will have more honey than was at first expected. Northern California has produced quite a showing of honey. Certain portions of Colorado show a good yield; and many places in the South have had fairly good flows of honey. But taking everything into consideration, Northern honey, both comb and extracted, will be a rather scarce article."

It will be seen by referring to the market reports, that prices of honey are stiffening up a little, so that those who have a crop this year will be able to get a fair price for it.

Philadelphia Convention Next Week!—Are *you* going to be there? The program is a fine one. The railroad rates are right. The Pennsylvania Lines are the ones to patronize if you are anywhere near them. A number of bee-keepers will go on the Pennsylvania road from Chicago, and will get on all along the way from here to Philadelphia. Dr. C. C. Miller and other prominent Western bee-keepers, with the editor of the American Bee Journal, will leave over this road Monday, Sept. 4, at 3 p.m. We want a large number of bee-keepers to go in that company. It will be a glorious ride all the way, and we can have a continuous, moving convention for 27 hours without a break—except to sleep and rest when tired.

The above train arrives in Philadelphia in time for the very first session of the convention, which is to be held Tuesday evening, at 7:30 o'clock. Don't forget the place of meeting is in Franklin Institute, 15 South 7th St., between Market and Chestnut streets.

And don't forget to go on the Pensylvania Lines if you want a pleasant and comfortable journey, thru scenery that rivals that of any foreign country. See page 513 of the Bee Journal of Aug. 17 for a few samples.

Mr. J. O. Grimsley, of Bee Co., Tex., expects to be at the Philadelphia convention.

* * * * *

Hon. Geo. E. Hilton, of Newaygo Co., Mich., wrote us Aug. 21:

"I never saw it so dull. The honey crop for Michigan is practically a failure. It has been one of the most singular seasons I ever saw."

* * * * *

Mr. Henry Yeigh, secretary of the Goold, Shapley & Muir Co., bee-keepers' supply manufacturers, of Ontario, Canada, called on us, Aug. 22, when on his way home from a six-weeks' tour to the Pacific Coast country. Mr. Yeigh is a very pleasant gentleman to meet. He reports a good season's business at their factory this year.

* * * * *

Mr. Chas. H. Thies, Randolph Co., Ill., with his sister, made us a very pleasant call, Aug. 23. He is one of the many reliable queen-breeders whose advertisements are found in the American Bee Journal, and he deserves all the success with which he is meeting.

* * * * *

Mr. A. T. McKibben, of Morrison Co., Minn., has sent us a series of photographs illustrative of his apiary and some of the implements he uses. The pictures are too dim to engrave well or we might use some of them in the Bee Journal. Mr. McKibben has 195 colonies of bees, but reports "very little honey as yet."

* * * * *

Mr. W. H. Putnam, president of the Inter-State Mfg. Co., of Wisconsin, dropt in to see us when in Chicago last week on a business trip. Mr. Putnam's factory is in a good lumber district, so they should be able to turn out bee-supplies in a satisfactory manner. Their advertisement is in every issue of the American Bee Journal.

* * * * *

Mr. Ed Goodrich, of St. Croix Co., Wis., places this estimate on the American Bee Journal:

"Any man that reads it for one year and doesn't learn something from it, is either too wise for this generation, or too thick-headed to learn. Long may the Bee Journal prosper, and continue to stand in the very front ranks of bee-literature."

* * * * *

Mr. D. H. Coggshall, of Tompkins Co., N. Y., writing us Aug. 21, said:

"I expect to be at the Philadelphia convention, Sept. 5, 6 and 7. I am getting a good flow of buckwheat honey now. I have seven yards of bees to look after, and it keeps me busy all the time. My hired hand and I took out 2,300 pounds of honey last Saturday afternoon."

* * * * *

Mr. Brooks D. Cook, of Worcester Co., Mass., wrote us Aug. 22:

"I intend to attend the Philadelphia convention of the United States Bee-Keepers' Association, next month. The nice, clear pictures shown on the first page of the 'Old Reliable' last week, make me wish that I was going to travel over the route with you. What time does the convention open?

"I wish you success in your efforts, and hope to meet you next month."

The convention opens Tuesday evening, Sept. 5, at 7:30 o'clock. We will be pleased to see you, Mr. Brooks, as well as 500 others.

* * * * *

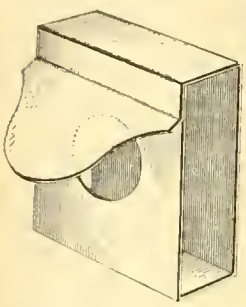
Ye Editor and Wife spent a very pleasant three days (Aug. 15 to 17, inclusive) at Old Salem Chautauqua, Petersburg, Ill. The Assembly is only in its second year, and yet there were present regularly between three and four thousand people. It is located on a lovely spot, where Abraham Lincoln spent his young manhood days. Everything on the place is replete with historic interest, and the program during the session was all that could be desired. It included Hon. James Wilson, Secretary of Agriculture; Hon. W. J. Bryan; Dr. P. S. Henson, of Chicago; Rev. Z. T. Sweeney, of Indiana; Prof. J. G. Camp, of Georgia, and many others, besides splendid musical talent. The assembly was in session from Aug. 11 to 22. It is a fine place to rest, and at the same time be lifted up mentally and morally. Better go next year if you can do so.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Root's Column

Danz. Cartons

We presume you have received a sample, but if not, send a 2-cent stamp for one. These are meeting with considerable favor, and as the price is less than the old, we look for a large sale. We have, in fact, already ordered 100,000 of this style. We are prepared to furnish the following sizes:



$4\frac{1}{4}$ x$4\frac{1}{4}$ x2
$4\frac{1}{4}$ x$4\frac{1}{4}$ x1 15-16
$4\frac{1}{4}$ x$4\frac{1}{4}$ x1⅞
$4\frac{1}{4}$ x$4\frac{1}{4}$ x$1\frac{3}{4}$, or 7-to-foot
$4\frac{1}{4}$ x$4\frac{1}{4}$ x$1\frac{5}{8}$
$4\frac{1}{4}$ x$4\frac{1}{4}$ x$1\frac{1}{2}$
4x5x1⅝
$3\frac{5}{8}$x5x$1\frac{1}{2}$

PRICES.

100.....	$ .50
500.....	2.25
1000.....	4.00
5000.....	17.50
10000.....	30.00

If you want your name and address printed on cartons, add to above prices: 30c per 100; 75c per 500; $1.00 per 1000. For more than 1000, 50c per 1000 after the first thousand.

All Prices Withdrawn

—ON—

BEE-HIVES, SECTIONS SHIPPING-CASES,

And all other Bee-Keepers' Supplies listed in our Catalog,

BOTH WHOLESALE AND RETAIL

Owing to the phenomenal advance in the cost of raw materials ranging from 20 to 100 percent, especially on lumber of all kinds, it is impossible longer to maintain former prices. New price lists are being prepared which we hope to have ready by Oct. 1. The advances will range from twenty to thirty percent. Orders received after Sept. 1 cannot be accepted at old prices. Instead of making gradual advances, keeping pace with the increase in value of the raw materials which has taken place during the past six or eight months, we have maintained former prices until the close of the season. Now we have to make the advance all at once, and on that account it may appear like a large advance; but it is not as great, figured in percents, as the advance in materials has been already, and still higher prices will undoubtedly be reacht on lumber during the next six months than those ruling at the present time.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

General Items

Button-Bush or Button-Ball.

I am sending a flower which grows here around the river bank, and would like to know its name, and how good it is for honey. J. ROORDA.

Jasper Co., Ind.

The plant sent by Mr. Roorda is the common button-bush or button-ball, an excellent illustration of which will be found on page 373 of my "Bee-Keeper's Guide." It grows abundantly on low, damp lands in all our Northern States, and, like the linden, which blossoms at the same time, affords a rich harvest-field for the bees, which they are never slow to occupy.—A. J. COOK.

Mason-Bees and Wasp.

EDITOR YORK:—Under another cover I send you a queen-cage containing four stingless bees, which I am anxious to know something about, and would highly appreciate any information regarding them. One you will see is almost jet black in color; two are brown, and the other, longer than the rest, is of a gray color, with yellow legs somewhat resembling a queen.

I found these strange little creatures some time ago working on the squash and pumpkin flowers in my garden; also a few on the sunflowers. These are the only plants that I have noticed them working on.

If you will notice, you can see that the tongue of these bees is a great deal longer than those of the blacks or Italians, and by drawing it out with a small pair of forceps you can readily see that it is of an enormous length, compared with other bees.

Cullman Co., Ala. ELBERT HAYS.

The insects sent by Mr. Hays are not all bees. Three are bees, one a wasp. The bees are solitary bees, which may be called mason-bees, as they dig in the earth. The wasp is also a digger. All bees feed young on pollen, and have broad, hairy hind legs. The wasps have slim, smooth hind feet. The bees feed pollen which they carry on the legs or hair. The wasps feed their young on insects. There are no stingless bees or wasps in our country, so far as I know, except they be males. I will speak more at length on this subject soon.—A. J. COOK.

"Bee Jones"—the Necromancer.

It may be that to an old offender the method employed by H. S. Jones, of this (Cook) county, would be considered matters of every day observation, but to young and succulent tyros in "apilore" his management of bees bordered strongly on the marvelous.

My recent call upon him resulted in much pleasure and instruction. I espied him under the sheltering brim of a big straw hat, which the scorching rays of the sun essayed ineffectually to curl. Squatted before a hive covered over with bees as I never saw before, he there soliloquized in good round English regarding the peculiar

IF YOU COULD buy a wagon that had everlasting wheels WOULD YOU DO IT? Wouldn't it be economy to do so? Well here's how Buy a set of Electric Steel Wheels They can't dry out and get loose; they CAN'T ROT OR BREAK DOWN. Don't make any difference what wagon you have we can fit it. Wheels of any height and any width of tire. May be the wheels on your wagon are good. If they are buy A SET OF THESE and have two wagons—a low one and a high one. Send for catalogue, it is free.

Electric Wheel Co., Box 16, Quincy, Ills.

Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot).....	60c	$1.00	$2.25	$4.00
Alsike Clover.....	70c	1.25	3.00	5.75
White Clover.....	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

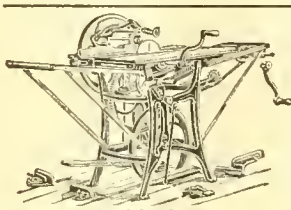
Your orders are solicited.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

QUEENS Either 5-banded, Golden or from IMPORTED Italian mothers, 60c each; or 6 for $3.00. A few line breeders at $1.50 each. Give me a trial and let me surprise you. Satisfaction or no pay. CHAS. H. THIES, Steeleville, Ill.

33Atf Please mention the American Bee Journal.



UNION COMBINATION SAW—for ripping, cross-cutting, mitering, rabbeting, grooving, gaining, scroll-sawing, boring, edge-moulding, beading, etc. Full line FOOT AND HAND-POWER MACHINERY. Send for Catalog A.

Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

Please mention Bee Journal when writing.

I HAVE an infallible remedy that will kill the POISON OF BEE-STINGS within THREE minutes after application. Any person sending 52 cents to M. Q., Lock Box 400, SPRINGFIELD, MO., will receive this valuable recipe by return mail. 34A4t

Queens at half price

Balance of season. Select Tested Italian Queens, $1.00; Untested Italian Queens, 50 cents. Every Queen warranted to give satisfaction or your money back. Queens by return mail as long as they last. Address, F. A. CROWELL,

34Atf Granger, Minn.

Please mention Bee Journal when writing.

BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. Minnesota Bee-Keepers' Supply Mfg. Co., Nicollet Island, Minneapolis, Minn. 18Atf

BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS—reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

TERRAL BROS. Lampasas, Lamp. Co. Tex

18Atf Please mention the Bee Journal.

Comb Foundation

Wholesale and Retail.

Working Wax

INTO FOUNDATION FOR CASH A SPECIALTY.

DO NOT FAIL

Before placing your order, to send me a list of what you need in

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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

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CHEAP FARM LANDS

Located on the Illinois Central R. R. in

SOUTHERN ILLINOIS

And also located on the Yazoo & Mississippi Valley R. R. in the famous

YAZOO VALLEY

of Mississippi—specially adapted to the raising of

CORN AND HOGS.

Soil Richest IN THE World.

Write for Pamphlets and Maps.

E. P. SKENE, Land Commissioner,
111. Cent. R. R. Co., Park Row, Room 413,
30A16t CHICAGO, ILL.
Please mention Bee Journal when writing.

THE AMERICAN
Institute of Phrenology,

Pres. MRS. CHARLOTTE FOWLER WELLS, incorporated in 1866, opens its next session on Sept. 5, 1899. For prospectus send free on application to the Secretary, care of

FOWLER & WELLS CO.
27 East 21st St., NEW YORK.
27A9t Please mention the Bee Journal.

FREE FOR A MONTH ....

If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

PAGE

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of Page Fence is not in doubt. Over 500,000 farmers are using it, and telling their neighbors to use it.
PAGE WOVEN WIRE FENCE CO., ADRIAN, MICH.
Please mention Bee Journal when writing.

BEE-SUPPLIES.

Root's Goods at Root's Prices.

Langstroth Hives and everything pertaining to same.

Muth Jars, Muth Honey Extractor —in fact everything used by bee-keepers. Send for our Catalog.

C. H. W. WEBER,

2146 Central Ave., CINCINNATI, OHIO,
Successor to
CHAS F. MUTH & SON and A. MUTH.

WANTED!

EXTRACTED HONEY

We are now in shape to buy Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank — The Brighton German Bank Co., both of Cincinnati, O.

27Atf Please mention the Bee Journal.

conduct of this particular swarm. I knew by the knitted brows of his gentle countenance that before him was a problem even more abstruse than any Euclid had ever thought of. But nothing daunted, one view was apparently clear to him—to divide that myriad of bees into two hives—a thing he magically proceeded to do in the most nonchalant fashion.

How he dared the peril of that swarming multitude without veil or other protection than his smoker is past my ken, but his means were certainly and speedily effectual.

Not only with his reasonable Italians did he thus dally, but a little later with a neighbor's dark Germans as well. His visit to them was an errand of pillage—the extortion of their coveted supply. Nothing daunted, he blew a volcanic blast into and upon them, then with a trusty old chisel separated the super from the brood-chamber, swept the lingering bees with a whisp of grass, and, presto! he had substituted empty sections for the luscious fat ones, and returned to the hive for a fresh refilling.

Now, what manner of man is this, that can breast the ire of the winged "beasties" without flinch or blanching? Or is he, as he really seemed, leagued with the abysmal powers, of reputation old and sulphury? Time was, in good New England, when such an exhibition of witchcraft would have insured the burniog stake, the pillory, or ducking pond at least. But 250 pounds of choice white honey, with slashens more in prospect, might incite even a less valiant person to the trial.

He vouchsafed me a suggestion which I surreptitiously repeat for the benefit of the less favored in bee-wisdom—as myself. Following the question of what I would do to make a swarm settle where I wanted it—the idea!—this subtle scion of Eribus, but in this life named Jones, actually confided that if a queen-cell were cut out in May, and the royal jelly contained in it smeared upon a convenient branch or fence, that the truant swarm, smelling this jelly, would alight upon it, or near it, when an empty hive would house them.

Shades of Mephisto! What occultism is this that so deep, dark and mysterious secrets remain yet unexplained? The thought of it maketh the shivers cool my spinal cord, e'en upon this sultry day!

Cook Co., Ill. EMM DEE.

Motherwort.

I enclose a sample of a plant that I would like to have named. WM. LYONS.
Sioux Co., Iowa.

The flower from Wm. Lyons, of Iowa, is the common motherwort—one of our most valuable honey-plants. Like almost all the mints, it secretes much nectar. It is illustrated on page 357 of my "Bee-Keeper's Guide." A glance at the admirable figure would have shown Mr. L. at once what the plant was. Nearly all our most valuable honey-plants are accurately illustrated in this book.—A. J. COOK.

Can't Complain of Honey Crop.

Our crop of honey is not as large as last year's, but we cannot complain.

E P GRIGNON.
Outagamie Co., Wis., Aug. 17.

A Splendid Honey-Flow.

The honey crop in Ontario is on the whole much below the average. The reports received by the Department of Agriculture indicate that the average surplus will not exceed 25 pounds per colony, whilst many will require to be fed for winter.

In this locality and in a few others, the flow was good, in fact with me the best I ever had, averaging fully 120 pounds per colony, spring count, chiefly from basswood. Management had a good deal to do with it, as others in this immediate locality do not speak of an average of over 50 pounds per colony, and some even less.

I wish to say that I am particularly in-

SUFFERERS

FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO,
34 Central Music Hall, CHICAGO.
Write at once. Enclose return stamp.

Please mention Bee Journal when writing.

Gold! Gold! Queens!

Leininger Bros' Queens are worth their weight in gold; large, prolific, yellow, and great RED CLOVER workers. We have secured 112 pounds of honey per colony as the result of the past poor season. Queens from the above strain will be sent by return mail at 50 cents each; ½ doz., $2.90. Queens warranted purely mated Italian.
LEININGER BROS., Ft. Jennings, Ohio.
33Atf Please mention the Bee Journal.

The A. I. Root Company

HAVE ONE OF MY

Hundred = Dollar Queens,

but I have two others from which I am rearing all queens. The A. I Root Co. say

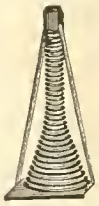
THE BEST BREEDING QUEENS

they ever had came from my apiary, and so say 5,000 other bee-keepers, and I can produce the letters backing up this statement. I have bred out the swarming and vicious characteristics from my strain of bees so that they are practically non-swarmers, and as gentle as one could desire. One Queen, $1.00; two Queens, $1.80; six Queens, $5.00, or $9.00 per dozen. Everything guaranteed.

HENRY ALLEY,
33Atf WENHAM, ESSEX Co., MASS.
Please mention Bee Journal when writing.

Wanted! Your HONEY

We will buy it, no matter where you are. Address, giving description and price,
34Atf THOS. C. STANLEY & SON, Fairfield, Ill.
Please mention Bee Journal when writing.



Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

BEE-KEEPERS!

Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

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ESTABLISH A HOME OF YOUR OWN

Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

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Golden Italian Queen Free For sending us One New Subscriber.

To any one who is now a subscriber to this journal, and whose subscription is paid to the end of 1899, or beyond, we will mail a Golden Italian Queen free as a premium for sending us **one new** subscriber for a year, with $1.00 to pay for same.

Address, **GEORGE W. YORK & CO.,**
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The Midland Farmer

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The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,
Wainwright Building, ST. LOUIS, MO.
7Dtf Please mention the Bee Journal.

Queens 5-banded Queens

by return mail, 50 cents each, $6.00 per dozen. Tested, $1.00 each. I have no 3-banded Queens or 3-banded drones in my yard this season. Am making a specialty of rearing only 5-banders.

DANIEL WURTH,
33D2t Fulmouth, Rush Co., Ind.
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IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

NOTICE.

H. G. QUIRIN, the Queen-Breeder, has

600 GOLDEN ITALIAN QUEENS,
WARRANTED PURELY MATED,

which will be sold, until further notice, at 50 cents each, or six for $2.75. Selected Queens, large and yellow all over, at 75 cents each; six for $4. Selected Tested, $1.50 each. Queens sent by return mail. Safe delivery and satisfaction guaranteed. My Queens are prolific, and the bees are excellent workers.

Read testimonials:

ROMEO, Mich., July 10, 1899.

MR. QUIRIN—Dear Sir:—The queens you sent me have turned out the yellowest bees in my apiary, are gentle to handle, are large and well markt. C. C. CHAMBERLAIN.

BLOCKLY, Iowa, July 5, 1899.

MR. QUIRIN—Dear Sir:—The queens I got of you last year are giving good satisfaction, better than some untested queens I paid $1.00 for, to breeders who sell for no less at any time of year. Yours truly, EDWIN BEVINS.

Address all orders to
H. G. QUIRIN, Parkertown, Erie Co., Ohio.
34A10t Money Order Office, BELLEVUE.
Please mention Bee Journal when writing.

Saw Wanted

I want a second-hand SAW for making hives.

Address, **CHAS. ARNESON.**
35A2t TAWNEY, Fillmore Co., MINN
Please mention Bee Journal when writing.

debted to an article in one of the May numbers of the American Bee Journal, from the pen of C. P. Dadant, for my success: in fact, I have found the American Bee Journal a valuable help to me in my apicultural work, and could not now very well dispense with its weekly visits.

Owing to the short crop, honey is in good demand, and bringing better prices than last season. A. BOOMER.

Ontario, Canada, Aug. 19.

Likely No Honey Shipt.

I do not think there will be any honey shipt from here this season. There is nearly a failure all over southwestern Colorado, and northern New Mexico. We have a fair crop, and I am selling at 8½ and 10 cents for comb, and seven for extracted now, with prospect of a rise.

MRS. A. J. BARBER.

Montezuma Co., Colo., Aug. 11.

A Beginner's Report.

I bought one colony of bees last spring, and they swarmed twice, but they have stored no honey in the sections over the brood-frames yet, but I think they soon will, for the flowers are coming into bloom on the low lands, and wild rice is just coming into flower. W. A. F. PETERSON.

Goodhue Co., Minn., Aug. 15.

Excellent Honey-Flow.

I have 25 colonies of bees, all in fine condition. The honey-flow in this locality was most excellent. I have taken off half a ton of choice honey (comb and extracted) so far, mostly from white and sweet clover, with prospects good for an abundant fall flow.

I have been reading the valuable American Bee Journal with much interest since I subscribed, last spring. The reports under "General Items," from various States, are especially interesting. V. H. FISHER.

Grundy Co., Ill., Aug. 21.

Bees Have Done Nothing.

Bees have done nothing here this summer. We may have to feed some, as it is too dry, and no nectar in the flowers.

GEORGE K. WHITE.

Ontario, Canada, Aug. 17.

The Spreading Disease.

In regard to what "Minnesota" has to say, on page 518, of the worm found in combs which have this bee-disease resembling foul brood, but which it is not, an acquaintance, in trying to clean combs of this dead brood, found quite a number of these worms, resembling wire-worms. The worms were found in the combs, when taken from the hive, but the dead brood had to be removed in order to find them. The McEvoy treatment for foul brood will not rid colonies of this disease, as we have

The Bee-Keeper's Guide

Or, Manual of the Apiary,

—BY—

PROF. A. J. COOK.

460 Pages 16th 1899 Edition 18th Thousand $1.25 postpaid.

A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisht to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipt, or his library complete, without THE BEE-KEEPERS' GUIDE.

This 16th and latest edition of Prof. Cook's magnificent book of 460 pages, in neat and substantial cloth binding, we propose to GIVE AWAY to our present subscribers, for the work of getting NEW subscribers for the American Bee Journal.

Given for TWO New Subscribers.

The following offer is made to PRESENT subscribers only, and no premium is also given to the two NEW subscribers simply the Bee Journal for one year:

Send us TWO NEW SUBSCRIBERS to the Bee Journal (with $2.00), and we will mail you a copy of Prof. Cook's book FREE as a premium. Prof. Cook's book alone sent for $1.25, or we club it with the Bee Journal for a year—both for only $1.75. But surely anybody can get only TWO NEW SUBSCRIBERS to the Bee Journal for a year, and thus get the book as a premium. Let every body try for it. Will YOU have one?

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

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If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

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The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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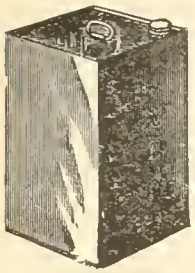
Please mention Bee Journal when writing.



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IN 60-POUND CANS.

We are prepared to furnish the best new Basswood Extracted Honey, in 60-pound tin cans, at these prices: Sample for 8 cents, to cover package and postage; one 60-pound can, at 8½ cents a pound; two cans or more, 8 cents a pound—CASH WITH ORDER. Address,

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PRICES OF

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January 27, 1897. Truly, W. H. EAGERTY, Cuba, Kansas.

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found by many experiments at different places. This disease is in many places in the East, and I hope to get some information as to the cause and cure, at the Philadelphia convention. I. J. STRINGHAM.
New York Co., N. Y.

Crop Almost a Total Failure.

The honey crop is almost a total failure here, but I must have the American Bee Journal, for of course I live in hopes of better times another year. There has been plenty of bloom, such as basswood and clover, but such a dearth of honey, that, like Dr. Peiro, I have been led to enquire, "Why was this thusly?" but that query is still unanswered. MRS. PAUL BARRETTE.
Crawford Co., Wis., Aug. 16.

Season a Perfect Failure.

The honey season in this locality has been a perfect failure. There will be no honey for the market from the great honey-belt of York State.

The bees wintered finely, and were in the best condition early in the season to handle a big crop, and the weather was delightful, just wet enough and just dry enough, to all appearance; but that mysterious cause that keeps the honey from flowing was here all thru the season.

Feeding will have to be done largely to winter the bees, unless something unusual happens.

"Bug-juice" is the only thing bee-keepers can look for to help them out, and that is very liable to be a failure, like the clover and basswood.

No one here is afraid of "bug-juice" to winter bees on; the only fear is that the "bugs" won't come; but it is very dry here, and this is the time they put in their appearance, if the weather is right.

IRA BARBER.
St. Lawrence Co., N. Y., Aug. 11.

Light White Honey Crop.

The white honey crop here is very light. We may have a fall flow, as rains have been abundant lately. EDWIN BEVINS.
Decatur Co., Iowa, Aug. 14.

No Surplus Honey Yet.

I can't do without a single number of the American Bee Journal. Bees are beginning to work on fall flowers; no surplus yet this summer. W. L. MCGHEE.
Jackson Co., Ohio.

Bees Didn't Do Well.

I like the American Bee Journal ever so much. I had 20 colonies of bees in the spring, increast to 31, and have taken off nearly 600 pounds of honey. Bees are not doing very well around here this year.

MRS. A. C. EASLY.
Fond du Lac Co., Wis., Aug. 12.

Bees Have Done Well.

Bees have done well enough up to date, and would have done better if those highway bosses had let sweet clover alone. To talk it into them not to do so is a thing utterly impossible GUSTAVUS KETTERING.
Will Co., Ill., Aug. 12.

Honey-Yield Promises Well.

Last winter was a very hard one here in northern Idaho, and most of the fruit was killed, and a good many colonies of bees lost, altho well protected with winter-cases and chaff cushions. I came out in the spring with 25 colonies, which have increast to 58. The spring was cold and backward, but the honey-yield bids fair to be a very good one.

My bees have access to an apple orchard of 25 acres sown to red clover, with abont two acres of mignonette near it, and a border of white clover eight feet wide on two sides of it. On many of my hives I have two supers, and expect they will almost all be filled. J. A. WATKINS.
Latah Co., Idaho, Aug. 7.

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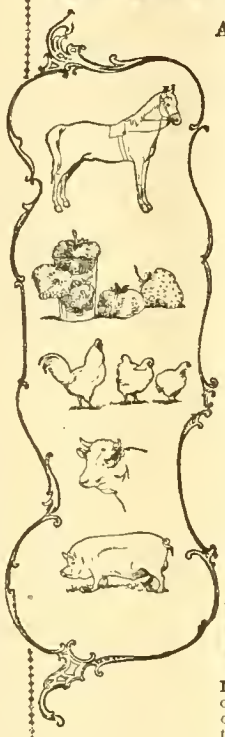

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Please mention the Bee Journal when writing Advertisers.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Aug. 19.—A few consignments of comb honey received this week, some cases of fancy in plain sections sold at 15 cents, other lots at 13@14 cents, while No. 1 sold at 12@13c; amber grades, 10@11c; dark, 7@9c. Extracted, white, 7@8c; amber, 6½@7½c; dark, 6c. All selling well. Beeswax, 25@26c.
R. A. BURNETT & CO.

KANSAS CITY, Aug. 10.—The receipts of honey are light, demand fair. We quote: Fancy white comb, 15c; No. 1, 14c; No. 1 amber, 12@13c. Extracted, white, 6@6½c; amber, 5½@6c; dark, 5@5½c. Beeswax, 22@25c.
C. C. CLEMONS & CO.

NEW YORK, Aug. 22.—Demand good for new crop comb honey, excepting buckwheat. We quote as follows:
Fancy white, 14@15c; No. 1 white, 12@13c; fancy amber, 11c; No. 1 amber, 10c. Extracted firm at unchanged prices. Beeswax dull at 25@26c.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 16.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾c; light amber, 6½@7c. Beeswax, 26½@27c.
The crop has proven exceedingly light. Market is firm at the quotations, the demand for best qualities being greater at existing rates than is the supply.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c.
A. B. WILLIAMS & CO.

BOSTON, Aug. 18.—Fancy white comb, 1-pound sections, 15@16c; A No. 1, 14c; No. 1, 12@13c; No. 2, 10c. Light amber extracted, 7c. Beeswax, 27c.
The demand for honey is very light, as is usual this time of year. While stocks are extremely light, the old being practically gone, and no new as yet. Owing to poor crop prospects prices are firm, and it looks as if they would remain so.
BLAKE, SCOTT & LEE.

BUFFALO, Aug. 25.—Receipts of fancy new 1-pound combs are very light, selling at 13@14c; fair to good, 10@12c; low grades less. Advise moderate shipments for the present. Some fancy beeswax wanted at 28@30c.
BATTERSON & CO.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.
PEYCKE BROS.

DETROIT, Aug. 19.—There has been no offerings of new honey and old is fairly well cleaned up. Fancy white we think would bring 14 cents, other grades proportionately cheaper. White extracted, 7@8c; no dark to quote. Beeswax in good supply at 23@24c.
M. H. HUNT & SON.

WANTED.—Comb and extracted honey: state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.
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Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for
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To say to the readers of the BEE JOURNAL that

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1 Untested Queen	$1.00
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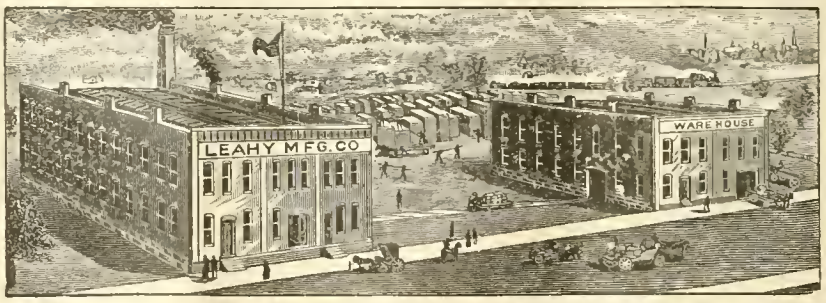

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If you have honey to dispose of, write us, stating the kind, quality, quantity, how put up, and the price wanted. If extracted, kindly send small sample when you write.

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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., SEPTEMBER 7, 1899. No. 36.

CONTRIBUTED ARTICLES

Review of the Large-vs.-Small-Hive Discussion.

BY ADRIAN GETAZ.

DURING the past few months quite a discussion on large or small hives has been going on in several of our bee-papers. Probably all that could be said on the subject has been said, perhaps not in every paper but in some one or other. Yet a few points need some explanation.

In the first place, it must be understood that the question is between large or small brood-nests, as it is supposed that all the supers needed to accommodate the honey-flow will be given in either case.

Next, a large brood-nest implies a colony of sufficient size to occupy it. This seems evident, and should not have to be mentioned, but, nevertheless, I was astonisht to see some of our best writers fail to grasp the situation and insist that it was useless to have a large brood-nest which would never be filled. Of course, it is useless to have a larger brood-nest than needed, but it is necessary to have it large enough to secure all the brood that can be reared.

Vice-President C. A. Hatch.

President and Director E. Whitcomb.

Secretary Dr. A. B. Mason.

How much is necessary? That's the question. All the partisans of small hives say that eight frames are all that an average queen can fill before the honey-flow. After the honey flow has begun, they want the honey to go into the supers instead of being used in the brood-nest. Right here those in favor of large hives say that their queens can fill from ten to twelve or even sixteen frames, and have a correspondingly large number of field-bees when the flow opens.

Why is it so? We cannot admit that small-brood-nest men (let us call them "small broodists") have inferior queens. Men like Doolittle, Hutchinson, and R. L. Taylor, know what a good queen is, and would have changed their stock long ago if it were so. In fact, Mr. Doolittle's queens, if they had a chance, would fill the biggest brood-nest ever dreamed of by the Dadants.

Perhaps their queens do not fill more than 8-frames because they have only that number. I don't think so. If their queens were able to fill more, they would give more. Men of their experience do not make such a mistake, and in fact they have tried and found 8 to be about the right number.

But the question remains, Why is it that the large broodist's queens can fill 10, 12 and 16 frames instead of only 8?

After reading all that I could find on the subject; after thinking a good deal and comparing their experience with mine, I say, unhesitatingly, that it

is because the small broodist's colonies are too small in the spring, or rather at the end of the winter.

The prolificness of the queen is not the only thing to be considered. No matter how many eggs a queen can lay, no more brood is going to be reared than the bees can take care of. This is especially true in the early part of the season, when the weather is cool yet, and the brood has to be well covered by the bees to get the necessary warmth. No brood will hatch, or rather emerge, until three or four weeks after the opening of the season, and during that period the strength of the colony will decrease all the time. After that, the amount of brood will increase slowly at first, then faster and faster until the honey-flow comes.

Now, it seems evident to me, and my experience has been in accordance with it, that the amount of brood secured at the opening of the honey-flow depends chiefly upon the strength of the colony at the opening of the season. With such colonies as the small broodists have at the opening of the season, only enough brood can be reared to fill the 8 combs by the opening of the honey-flow. With a colony 50 percent stronger in population, 50 percent more brood could be reared—12 combs occupied instead of 8, and with a population 50 percent larger, 50 percent more of surplus could be secured.

It seems to me that I see somebody bobbing up with the question, How do you know that the small broodists winter only small colonies?

Well, I know it by their own writings. It is only two months ago that Mr. Hutchinson said in the Bee-Keepers' Review that in Michigan a large colony would be almost sure to rear brood in the winter, and come out practically worthless in the spring. Mr. Doolittle has said, time and again, that small colonies (he calls them medium) winter better than larger ones. Mr. Davenport, in a late number of Gleanings in Bee-Culture, wrote that whatever was the strength of the colony in the fall, the spring would find them very nearly alike, and it was therefore useless to winter too large colonies. Mr. Heddon contracts his brood-nest in the summer, and winters only what can occupy one section of his hive. R. L. Taylor also says the small colonies winter the best.

The question is now: Supposing the large colonies could be wintered equally well, which would be the best—80 colonies of 12 combs and population in proportion, or 120 colonies of 8 combs, the total population to be the same in either case?

The difference may depend upon the nature of the honey-flow, and might not be very great; but it would undoubtedly be in favor of the large colonies. There would be only 80 entrances to guard against robbers instead of 120. It would take less bees to keep up the heat necessary for 80 brood-nests than 120 smaller ones, on the same principle that it takes less fencing to enclose one field of two acres than to enclose two fields of one acre each. When supers are to be put on or taken off, there would be only 80 hives to open and smoke, instead of 120, and therefore a saving of time; and probably less swarming, and less danger of starving in case of a dearth of honey in spring, or inadequate provisions in the winter.

Director C. P. Dadant.

Whether large colonies can be wintered as well as small ones in the North, and in the cellar, I cannot say. In my latitude, wintering outside, the large colonies winter far better than the small ones.

Knox Co., Tenn.

Use of Queen-Excluders.

BY C. P. DADANT.

MR. M. D. ANDES, of Tennessee, wrote me as follows on the subject of queen-excluders:

Director E. R. Root.

"I have just read your article on page 482, and I am anxious to know if you use queen-excluders between the supers and the brood-chamber. My 10-frame hives I have been running for comb honey and the 12-frame ones for extracted honey for family use. My experience in working for comb honey agrees with what you say in the article referred to. It requires too much work and too much attention for a person engaged in other business, and I have decided another season to run all my hives for extracting. I find the queen will come up into the extracting-super and will deposit eggs in half or more of the frames, and altho the brood hatches out by the end of the harvest, I find the bees deposit more or less pollen in those combs which the queen has occupied, and it seems to flavor the honey to some extent. Will the use of excluders prevent the bees from depositing pollen in the supers? and is it a great obstruction to the bees in passing up or down?—M. D. ANDES.

In reply to the first part of the question, I will say that the use of excluders will decidedly prevent the putting of pollen in the supers. First, a bee laden with pollen will often lose her load in passing thru the meshes of the perforated zinc, but what is of more importance is that they have no desire to place their pollen away from the brood. It is well known by all practicing bee-keepers that the pollen is always, or nearly always, placed in the brood-combs or in the outside combs as close to the brood as possible. It is only when the brood extends clear up to the upper edge of the frame that there is any tendency at all to put pollen in the sections immediately above it. A queenless colony, which has no brood to rear, might put pollen almost anywhere about the hive, but such a colony is not in a normal state and not likely to harvest any surplus at all; and if it did, it would only be an exception that would strengthen the rule, since it is commonly agreed that there is no rule without exception. So with excluders, there is but little to fear of pollen out of the brood-combs.

As to the last part of the question, I must say that I am not in favor of queen-excluders, for the very reason that it seems to me that they are a very real hindrance to the free access of bees to the supers. The bees laden with honey cannot but be hampered by these unnatural obstructions, and ventilation is also obstructed. And if we judge from the sales of these excluders when compared with the sale of other bee-appliances, there is but a very small portion of the bee-keeping public who use them at all. Yet, if excluders are properly mounted in a honey-board with a bee-space both above and below, it is quite possible that big crops may be harvested in spite of the hindrance they may cause. They are certainly not as much of a nuisance as the Alley queen-trap or the bee-entrance guards, which are used by some apiarists to prevent swarming. These devices do prevent swarming, and yet I would not use them on my own hives, owing to their being so very much in the way of the worker-bees.

We have tried queen-excluders, but have no use for them in producing extracted honey. We find that with deep-frame hives two inches deeper than the Langstroth—the bees rarely go above to breed. It is only in extraordinary seasons, when the crop is intermittent, altho good, that the queen accidentally finds herself crowded up into the supers. This does not happen with us more than one year in ten, and the possible loss of time caused by the excluders, besides the trouble of putting them on and taking them off,

would not be repaid by the exclusion of a few combs of pollen or brood.

It may be, however, that not only the shape of the frames, but the location, and the conditions of the honey crop may have something to do with the queen's occupation of the supers, and for that reason we would not entirely deter Mr. A., or any one else, from trying these excluders if they find themselves unable to keep the queen in the lower story; but we would urge them to use them sparingly until they find them of actual benefit, and I believe that the experience of a number of seasons will show that it is only accidentally and rarely that the queen will lay in the super if the lower story furnishes her sufficient breeding-room.

Whatever we do in bee-culture, it is always advisable to look to the comfort of the bees and to try to keep them, as nearly as possible, in a manner to give them the greatest possible ease for the gathering of their crop. We must remember that it takes millions of loads of a single bee to fill a good-sized super, and the results of their industrious toil will be much greater if we make the work easy for them.

Hancock Co., Ill.

Bee-Keeping and Horticulture.

BY HON. GEO. E. HILTON.

The interests of the bee-keeper and the horticulturist are mutual. If we are both successful, we are both enthusiastic. I need not remind any one who plants trees and grows fruits, of the genuine pleasure that thrills the soul when Nature responds to his intelligence, thought, and careful direction. He builds a world in which he himself lives. He desires no other intoxicant to insure his happiness. Horticulture is one of the fine arts, and requires the skill of a master. It is just as impossible for the thoughtless, brainless man or woman to reach the highest round in the ladder in propagating fruit or carrying on a successful apiary, as it is to appreciate success if achieved.

But, after all man's skill in planting, after searching the world over for improved varieties, after propagating, grafting and hybridizing, he must rely mainly upon Nature's methods of fructification. The balmy winds of spring and industrious bees are needed to fertilize the bloom to insure a harvest of fruit. For this purpose, there is no question but that the bee is of great service to the grower of fruits. No other insect appears in such vast numbers at this very important time in the spring when their agency is so much needed to fertilize the orchards and small fruits. If the winds, and other insects aside from the bee, were the only means of carrying the pollen from flower to flower, how often would perfect fertilization fail from too much or too little wind during the brief opportunity when the bursting buds are sighing for the life-giving dust from the neighboring flowers.

Not only has Nature, in her wisdom, provided the tempting honey to entice the bee, but the pollen, so essential to the plant (and just as essential to the bee in furnishing the proper food for its young), is placed in close proximity to the nectar, so that in getting either, the bee is unwittingly carrying the dust from flower to flower, or working out the wise plans of Providence as relates to plants, and catering to man's taste at the same time.

Director W. Z. Hutchinson.

The Creator did not place the drop of nectar in the flower because it is needed to perfect either the flower or fruit, but for no other purpose than to tempt the bee to brush its hairy legs against the anthers, and carry the golden dust from one flower to another. So the horticulturist cannot but look upon the bee as his friend, and certainly the horticulturist is a friend to the bee and bee-keeper, and their interests should be mutual.

What, then is there to hinder these two vocations from going hand in hand since each is helpful to the other? They should at least be on the very best of terms, as each furnishes inducements for the other to live and profit thereby.

Director Dr. C. C. Miller.

A great deal has been said about bees injuring fruit—some fruit-growers claiming that bees puncture the ripe grapes, suck the juice and destroy the crop. But from the physical structure of the bee, this is said to be impossible by scientific entomologists. It has no jaws like the hornet; it is made to suck, not to bite, and on close observation, and after repeated experiments, it has been found that where bees are found helping themselves to ripe fruit, the skins had been ruptured by the weather, or over-ripeness, or that hornets, wasps or birds, had first been the infringers. But after the skin has been broken from any cause, if there is a scarcity of honey, the bees, always anxious to be doing something, will endeavor to get their share of the plunder.

Therefore, as regards bees injuring fruit, I, as their attorney, shall claim to the jury that the charge is not proven, and I believe that to-day the more intelligent class of horticulturists agree with me.

I feel I cannot dismiss this subject, which, to the lover of fruits, flowers and bees, is a genuine source of delight, without quoting a few lines from "The Planting of the Apple-Tree," by that venerable sylvan poet, our own Bryant, who saw so much of future hope and promise as he sifted the soft mould about its tiny rootlets:

> "What plant we in this apple-tree?
> Sweets for a hundred flowery springs
> To load the May Wind's restless wings,
> When from the orchard row he pours
> Its fragrance at our open doors—
> A world of blossoms for the bee."

Newaygo Co., Mich. —Michigan Farmer.

Bee-Keeping at Experiment Stations and Agricultural Colleges.

BY REV. EMERSON T. ABBOTT.

IT has long been a query in the mind of the writer why more attention is not paid to apiculture by those who are interested in the general advancement of agriculture. Most of our experiment stations and agricultural colleges ignore this industry and utterly fail to recognize the fact that it is one of the most important of the minor industries of the farm. In addition to the regular curriculum most of the agricultural colleges have what they call "short winter courses," during which time instruction is given on the practical side of farm life to those who may desire to attend, but there is seldom anything said about bee-keeping in this course. It is as completely ignored as tho there was no such industry in the land. In our own State (Missouri) only once in a number of years has anyone been employed to represent this industry before the students of the short

Director Emerson T. Abbott.

course. Since that time it has been completely neglected, as it is in most other States.

When the matter is presented to those in authority, the excuse is made that there is no money to even pay the board and traveling expenses of a competent man to present the subject, yet money is found to secure teachers in every other branch of agriculture, and every two years our legislature is askt to make large appropriations for the benefit of the agricultural school and the experiment station. There is never a hint of any of it being used for the advancement of apiculture, notwithstanding the fact that there is a large number of bee-keepers in the State who are taxt to help advance the interests of other industries. At the present session the legislature will be askt to appropriate $30,000 to advance the interests of horticulture, but there is no thought of any money being used to promote bee-keeping, notwithstanding the fact that the horticulturist is largely dependent upon the bee-keepers, or at least the bees, for the perfect development of his fruit.

I would suggest to the bee-keepers of this and other States that they now begin to make themselves heard with regard to this matter. Taxation without representation made some serious trouble a long time ago, and we give due notice to the powers that be that it will not be our fault if it does not do the same thing again. We herewith begin a campaign in the interest of the proper recognition of apiculture at every experiment station and in every agricultural college of the land, and we ask all editors who believe that bee-keepers have some rights, to join us in this important work.

There is no rural industry about which people in general have so little practical knowledge, and many, even of the graduates of agricultural colleges, could not even tell a queen from a drone, and most of them are as absolutely ignorant of the interesting and delicate but very important part which the bees play in the production of perfect fruit on vine, tree and shrub, as they would have been if they had been born in the dark ages instead of in the burning light of the 19th century.—Selected.

Buchanan Co., Mo.

Mating Queens to Selected Drones.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes that he has bought two queens—one from an imported mother and one of the golden variety. Says he is going to rear queens from one and drones from the other, so that he may secure a direct cross. He further states that there are no other bees within nearly two miles of him, and wishes to know if he will not be nearly sure of his object under such conditions. As something similar to this is propounded to me quite often, I will try to give my views thru the columns of the American Bee Journal so as to gain a little rest from answering this same question over and over so many times. And it must be an interesting question to many, else I would not have it askt me so often.

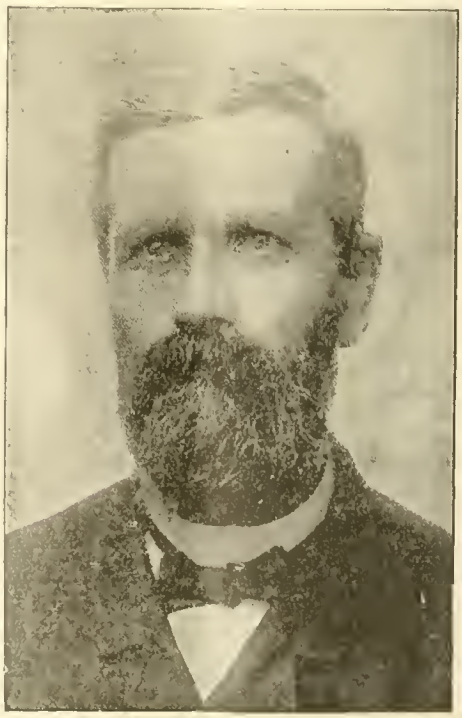
From what I have seen and heard I believe that drones have congregating places where they assemble in great numbers from all over the country for miles around. Such congregating of drones has always been of interest to me, and should be of interest to all those who propose, as does our correspondent, to rear drones from a certain queen, and queens from another; and also to all bee-keepers who have any ideas regarding the improvement of stock along certain lines.

If drones congregate in certain places, it would be but natural that the queens should be drawn to these places, and the fact that I once observed something which proved to my mind that the queen, at least, was mated at such a congregating place, has led me to believe that nearly all queens meet the drones at such an assembly. And if drones do thus congregate, and the queens go to this congregation, it must be apparent to all, that where there are any bees in the woods, or bees kept by farmers within the flying distance of drones, our queens, reared with so much care, will stand a poor chance of mating one of the desired drones reared from our petted drone-queen, especially as the colonies kept on the let-alone plan will, as a rule, rear 10 times as many drones as will the one we are petting.

Where I witnest the mating of a queen was on a high hill when I was cutting weeds out of a cornfield the forepart of August. On every fine afternoon, from one to three o'clock, there was such a humming in the air overhead that it seemed that a swarm of bees must be going over, and at first I lookt for them; but seeing nothing I concluded it was flies of some kind. One very hot day, being tired and warm, I laid down between the rows of corn in the partial shade to rest, and hearing this swarming noise I thought I would see if I could not see something. The shade of the corn helpt me in this, and then I shaded my eyes with my hands and lookt steadily up into the clear sky. After a little I could see thousands of living creatures shooting in all directions, and finally I saw a dozen or so of these shooting objects give chase after another till one overtook it, when the flight was less rapid. The two continued circling around a few seconds, all the while nearing the ground, till they finally stopt on the tassel of a cornstalk near me. I immediately jumpt up, but before I reacht the stalk of corn one of them flew away and the other fell to the ground. I was quite near when the one flew away, and I was quite sure it was a queen-bee; and upon picking up the one that fell to the ground I found it to be a dead drone.

I had now solved the mystery of the humming noise to the satisfaction of my own mind; and when I have since heard this same humming noise, as I very often do, I have believed it to be drones in their congregating places. The fact that this noise is heard only in the early afternoon of pleasant days also proves that drones congregate, for I never heard this noise except at this time of day, the same being just the time the drones are out in full flight. If it was made by the worker-bees it would be heard in the forenoon as well as in the afternoon.

Another item bearing on this subject is the fact, that, prior to the advent of the Italian bee, there was a man who lived near me who had kept black or German bees for nearly half a century, while at this same time another bee-keeper living four miles away procured an Italian queen, when they first came to this country. He purchast this Italian queen in July, and from this one queen stockt his whole apiary of nearly 50 colonies, doing it within 6 weeks, there being no drones reared from any of these Italian queens that



General Manager and Treasurer Hon. Eugene Secor.

year, nor from their mother. According to Dzierzon, the young queens, as well as the mother would all produce Italian drones. As this man who stockt his apiary with Italian queens took no pains to restrict the rearing of drones, multitudes of such were reared the next season, and, as a result, fully ¼ of the queens reared that year by our black-bee bee-keeper gave more or less bees with yellow bands, as I well know, being called in to see them.

I lived nearly five miles from this same Italian bee-keeper, and many of the young queens which I reared proved to have mated with these same Italian drones, from the markings of their workers. This fact has always proven to my mind that drones not only congregate, but that bees must be kept more than five miles apart if we would secure the mating of our queens to the drones which we rear in the colonies set apart for drone-rearing.

From the above it will be seen that I do not take any "stock" in the idea that queens are liable to meet the drones reared for them to so mate, where apiaries are located within two miles of each other. Onondaga Co., N.Y.

Spraying Fruit-Trees—Expert Opinion.

BY PROF. A. J. COOK.

THE following letters were sent me by the editor of the American Bee Journal, with the request that I comply with the desire of Mr. Roe, of Texas:

EDITOR YORK:—The enclosed letter I received in reply to a question in regard to bees and pear-blight. I am defending the bees against the efforts of a nurseryman at Alvin, Tex., who recommends spraying pears when in bloom, in order to prevent the spread of blight. Please inquire into this, and publish in the Bee Journal. I would like to know Prof. Cook's opinion. WESTROPP ROE.

MR. WESTROPP ROE, ESQ.—

Dear Sir:—You can ascertain just what the best information on the blight of pears is by writing to Prof. M. B. Waite, Division of Vegetable Pathology, United States Department of Agriculture, Washington, D. C. He is an extensive pear-grower, and has publisht the best treatment of anything publisht on pear flowers.

It is well establisht that bees are very instrumental in spreading pear-blight, especially if the trees are blighting while they are blooming. If the blight comes after the trees are thru blooming, then the bee cannot help to spread it. It has been proven that bees visiting the bloom of blighted trees, and going away to those yet healthy, will carry the germs to the healthy orchard. This matter of the agency of bees in the spread of blight is publisht in a short article in one of the Year Books of the Department, but I am not sure which one.

Trusting that you will get Mr. Waite's bulletin on pear flowers, and get together all the information possible for your own instruction as well as others, I beg to remain, Very sincerely yours,

FRED W. MALLY,
Entomologist Texas A. and M. College.

I am much interested in the letters from Mr. Roe and Prof. Mally, from Texas, regarding pear-blight, and the influence of bees in spreading it. I am rather surprised that Prof. Mally did not speak with authority against all spraying of fruit-trees with poison while the blossoms are yet on. I am also glad that he referred Mr. Roe to Prof. Waite. There is certainly no better authority in this country than Prof. W. in regard to this matter. It is also a pleasing fact that with all his knowledge he is an ardent friend of the honey-bee, and urges that every fruit-grower sees to it that there are abundant bees in the vicinity of his orchard.

It is true that pear-blight is one of the most serious diseases that the orchardist has to contend with. It is probably true that the disease is conveyed by insects visiting the flowers. This is no more true of bees than of any other insects. The remedy against such disease is the spraying of the trees with the copper salts in some convenient mixture—the Bordeaux mixture being favorite—I think, tho, that none of our best authorities in vegetable pathology recommend the spraying of fruit-trees with this or any other poison while they are in bloom.

In case of treatment with the Bordeaux mixture the spraying is done before the blossoms are opened, and again later in the season. The spraying while yet in bloom is to be strongly objected to because of this evil effect upon the bees, and again because there is no use in doing this. As a remedy against blight, or other microbe diseases which are destroyed by a solution of the copper salts, it should be applied very early, as soon as the buds begin to swell. It is at this time the disease is most susceptible of treatment. Suppose we wait till later, and spray the trees while in bloom, it is probable the treatment is not so effective, and tho it might kill the bees it would not do so immediately, and so would not prevent these insects, or any other nectar-loving species, from visiting other bloom and conveying the germs of this disease. Thus there is no excuse for ever spraying trees with poisonous compounds while the blossoms are yet on the trees.

Mr. Roe may safely follow Prof. Mally's advice, and get all possible information on this subject.

SPRAYING WITH THE ARSENITES.

While discussing this matter of spraying I wish to express my gratification that all the entomologists have fallen into line and now discourage the use of Paris green or London purple in spraying trees while the blossoms are still hanging. I well remember when I was alone in this position. Years ago I knew of colonies of bees almost depopulated by this arsenic poison. As I have intimated above, the bees were not at once poisoned, and so were able to carry the poison to the hive and store it with the honey. This was fed to the brood, and as a result there was a great mortality among the brood no less than with the mature bees. It is not strange that the bees are not at once killed. The bees do not sip the nectar from the flowers for their own immediate nourishment, but store it in their honey-stomachs to be conveyed to the hive. Thus little if any of this nectar is absorbed into the blood, and so will not poison the bees until fed upon later, after it is digested or changed to honey. It might be argued, with no light force, that trees should never be sprayed with poisons while in bloom, lest persons may be poisoned who may eat the honey. Indeed, I think there would be great danger of this except from the fact that bees gather so little honey from the fruit-bloom that it is rarely stored for sale, and only used by the bees. I am not sure that the bees would get enough of the poison to hurt us, even tho they did store nectar from sprayed blossoms in the hive. I have reason to believe that there would not be enough poison in the nectar of the blossoms to do us any perceptible harm; yet I think all of us would prefer our honey with the Paris green left out.

There is another reason why no one should spray their trees while yet in blossom. Such spraying is usually done for the codling-moth, and we now know that the eggs are not laid on the fruit until the blossoms fall, and do not hatch for some days after this. We also know that the wind will remove the poison, and thus to get the best results from spraying we should not spray until about three weeks after the trees begin to bloom, or until the blossoms have all fallen from the trees.

Prof. Waite has performed a most valuable series of experiments, which show conclusively that we cannot grow either apples or pears with the best success unless we mix many of the varieties, and have the presence of bees to perform the important and often necessary work of cross-pollenization.

There are a few insects—the bud-moths—the larvæ of which feed upon the buds. In cases where these insects are very numerous it may be very well to spray with the arsenites. And in case of the presence of either the apple or pear blight it may also be well to use the Bordeaux mixture. In this case it is found well to combine the two—the arsenites with the Bordeaux mixture. But here again the spraying should antedate the blossoming season, as the bud-eaters are doing their mischief before the bloom opens.

We see, then, that in all cases spraying should be delayed until after the bloom has fallen from the trees, or else performed before the trees blossom, and never be applied while the bloom is on the trees.

Los Angeles Co., Calif.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

THE AFTERTHOUGHT

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

EDITOR ROOT'S "UNCONSCIOUS BEAUTY."

When that UNCONSCIOUS beauty's found and caught,
Next catch a man who's wise and knows it not;
Then let a saintly priest, that isn't proud,
Send them to nuptial heaven in a cloud.

TIN-PAN MUSIC FOR BEES PRETTY OLD.

That was a bright idea (page 537) which explained the origin of tin-pan music for bees by an act of the British Parliament a thousand years ago. Alas, what a merciless thing truth is, and what a lot of pretty conceits it destroys! It kills off our William Tells, and makes our Pocahontas-es mere young squaws. The trouble here is that the custom of making a racket to settle a swarm is certainly many hundreds of years older than that parliamentary act. Virgil, nearly a thousand years before, speaks of it as well known, and seems to connect it with the events of Jupiter's babyhood—which would be getting back about as far as Adam. This much is the best we can say—that the law may have done something to prevent the custom from going out of use.

TWO YEARS TO GERMINATE BASSWOOD SEED.

As to basswood seeds alluded to in the editorial note, page 536, a friend of mine with botany on the brain tells me that basswood is only one of several genera of trees that regularly require two years for the germination of their seeds. Most bee-folks who have planted them gave them up after one year. Two years gives that under-the-snow rascal—the stump-tailed burrowing mouse—extra opportunities to gather them in as winter provender, It is desirable to find some way to get on Nature's blind side, and reduce the germinating period to one year; but may-be we won't succeed. I am trying the trick of picking the seed from the tree a little before it is ripe and planting it then. If I find out anything I'll report.

HOW TO WATER BEES.

If any one has any doubt that apiarists are a versatile and inventive people let him read the answers to Query 99 (page 491)—how to water bees. Out of 30 respondents, 7 are together in depending upon natural supply only, and 4 advise wooden floats of some sort; all the rest are as well scattered as the brood of chickens when lightning struck the old hen. Ten of them present special watering devices requiring considerable genius to invent. A. I. Root's familiar old water-fountain is evidently going on the retired list, as it has but two or three followers. What I had previously supposed to be the best was the invention of Dr. Miller—big crock, big coarse cloth over, and chunk of wood not too rotten, but just rotten enough to soak well, and a little smaller than the crock, laid on cloth and prest down in. But I see the Doctor abandons this in favor of a crock stuft with simple stovewood. Perhaps the rotten wood gets corrupt too soon. Perchance all wood and cloth devices may have to go eventually for that and other reasons; and Dr. Mason's crock, with half inch of cappings floating in it, may take the cake. All wooden floats are a weariness to the flesh—they learn to sink so soon.

SOLAR WAX-EXTRACTORS.

Too awfully small for a solar wax-extractor, is a wash-basin (page 490), but the *idea* of a metal solar, of moderate size, plunged in a box of dry sawdust, may be a very valuable idea. For one thing, a single cheap pane of glass will answer. For another thing, the whole affair can be set on a lamp-stove for a few minutes at the close of the day, to make the resultant cake of wax a good one—one of the most difficult points. I am not satisfied with my own solar—too bungling—will be more so if I improve it so a lamp-stove *can* be put under the wax. I don't think a double glass pays its keep, except, perhaps, on days when big clouds float in the sky; then the air space holds heat "till the clouds roll by, Jennie." The refuse cakes of a solar can be kept for any length of time, if it is desired to get a little more wax out of them with heat and press. But no one seems to come forward with a *satisfactory* way of removing the refuse cake of propolis, dirt and waste.

GETTING GRANULATED HONEY OUT OF COMBS.

Mr. John Kedrick's liquid to draw granulated honey out of the combs (page 488)—what *is* it? Fermenting, half-made honey-vinegar, is it not? And isn't the granulated honey wasted, except as more vinegar material? And couldn't patience mixt with pure water be made to do the job? But if the liquid will take out old pollen also, perhaps that may be worth while, sometimes.

EASIER RIPENING OF HONEY IN HEAVY-CROP YEARS.

Honey ripens easier in years when the crop is heavy. Dadant, page 482. Guess that's so—but isn't it about the first time it has got into print?

MRS. BARBER'S BARBAROUS HIVE-COLLECTION.

"All kinds of hives but good ones," eh? The condition of Mrs. Barber's apiary as a bee-feverish beginner. Page 481. Yes, to the callow judgment trifles seem as mountains, and mountains seem as trifles, until we get just such a preposterous collection.

FRANCE'S "TABERNACLE" AND COMB-RACK.

Mr. France's tent (page 497) is a nice one—a regular Tabernacle to go thru the Wilderness with. Reminds me of mine, only mine was much smaller—rotted down with age, having been used comparatively few times in its life. Next I got a folding tent of the Roots—and the mice made it up into nests. You see, when one gets along without a tent as much as he can the remaining cases get fewer and fewer, until when a time he really needs a tent comes he hasn't one in working order. Curiously, bees are much more civilized in their behavior under a tent than outside—but ah, the swelter of it on a hot day!

On the picture of the comb-rack I would say, *When you have room enough* space the combs a little wider than those are spaced.

DADANT'S HONEY-BARREL—NO BACK TALK.

As to Mr. Dadant's article (page 498), I guess I'll introduce the habit of not talking back much to those who reply to afterthinks—unless there is something that urgently requires more words. Say, if I succeed in that, won't I be a shining example to the brethren?

A CREDITABLE BEE-TREE-HUNTING SYMPOSIUM.

That symposium on bee-tree hunting in summer, page 499, is quite a credit to the paper. Mr. Clark should be satisfied, unless he is a spoilt child of the kind that cries for the moon. To be out 20 times in one July, and find bees ready to meet you every time, is a remarkable experience. Still to say that they will respond in June, July and August "as well as any other months of the year," is going a bit too far. Thanks to Mr. Record for the teaching that oil anise must be kept outside of the box, and used only as a scent. Most of us would have blundered there, if left to ourselves.

PROF. DICKEL VS. DR. DZIERZON.

I guess we owe it to Prof. Dickel to try next season (a good many of us) the two experiments he suggests, and the one outlined by Comrade Theilmann, on page 500. One success on such a line seems to indicate that notwithstanding appearances the queen did lay some drone-eggs in the worker-comb, but many successes would rather prove the contrary, and send the Dzierzon theory to the shop for repairs.

SEX IN BEES AND BEE-WRITERS' CHILDREN.

That lecture of Peter Bois on sex in bees, page 500, almost silences me. Examine the families of bee editors and writers, and see if their children are all females—they receive so few *checks*, you know!

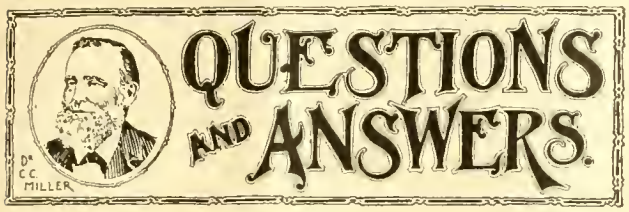
MISS ANNA'S REPORT AND PICTURES.

Compliments to Anna Sundberg, page 505. Her report and series of bee-pictures are extraordinary for a girl of 15. Still, her drone lacks his characteristic bluntness, and her queen lacks the characteristic taper. Makers of advertising cuts oft fail on that difficult taper, and make a wooden spile.

THE KINGBIRD A BEE SQUEEZER AND SUCKER.

The observation on the kingbird—that he usually squeezes and sucks dry a worker-bee while holding it in his

bill instead of swallowing it, seems to reconcile things nicely, and should not be forgotten—unless disproved. Page 505.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Probably Faulty Queens.

I received an Italian queen from a queen-breeder who advertises in the American Bee Journal, about the last of July. She was successfully introduced in about two days. I noticed that she laid four or five eggs in one cell all around the edge of the bottom, but not in the center, some eggs on the side of the cell and some in the center of bottom, and sometimes one egg right on the end of another egg. Where the brood is sealed it shows to be more than half drone-brood, right among the workers in good worker-comb. My neighbor got a queen from the same breeder, at the same time, and his has all drone-brood in the worker-comb. What do you think is the trouble? MICH.

ANSWER.—It is to be feared that the queens are at fault, if you are sure that the queen is present in both cases. Report the circumstances to the breeder, and the probability is that he will replace the queens.

Mixt Bees in a Colony.

I had a colony of bees come to me June 1, being of a different kind of bees from what our general hybrids are. They are smaller and slimmer, with very narrow whitish-looking bands around the body; very gentle, and good workers. About the first of July I gave this and one other colony Italian queens; the one has now nice yellow Italian young bees, and the one I refer to above has young bees a little larger and not so slim as the old, with only two yellow bands. Why are they not all yellow? ILLINOIS.

ANSWER.—The difference in the young bees that emerge three weeks after the introduction of the new queens is caused by the difference in the new queens themselves. If you refer to the young bees emerging before that time, then of course these young queens have nothing to do with that. If the two queens were alike in every respect, then their progeny would be the same, no matter what kind of bees were in the hive at the time of their introduction. The queen that produces workers with only two yellow bands has probably mated impurely.

Directions for Use of Naphthaline and Naphthol Beta.

On page 467, Mr. Cowan, in an article on the treatment of foul brood, says he always has naphthaline in the hive, and that he uses naphthol beta in food for bees.

1. Would there be any evil results from the use of either of these drugs?

2. What quantity of naphthaline should be placed in a hive, and how could it best be kept from the bees?

3. How much naphthol beta should be used per gallon of food?

At present there is no foul brood in my apiary, but there is quite a bit in this neighborhood, so I wish to guard against it as much as possible. ONTARIO.

ANSWERS.—1. A great many have used them, especially across the ocean, and I've never seen any report of bad results.

2. No special precaution is needed to keep it from the bees; they'll look out for that part themselves. Mr. Cowan says in the "British Bee-Keepers' Guide-Book:" "Naphthaline in balls is generally used; two of these split in half being the proper dose. The pieces are placed on the floor-board of the hive in the corner farthest from the entrance. The temperature of the hive causes the naphthaline to evaporate, and it must therefore be renewed as required."

3. Mr. Cowan says: "For convenience of measuring, procure from a chemist an 8-ounce bottle, markt with 16 divisions of half an ounce. Thus each division will be equal to one tablespoonful. Put an ounce of naphthol beta into the bottle and half fill with pure methylated spirit. Shake until the crystals are dissolved. Then add spirit till the liquid reaches the fourteenth line on the bottle. The solution is then ready for use. Each division will contain one tablespoonful, which is just the right quantity for 10 pounds of sugar. The solution should be stirred into the syrup while the latter is still hot."

Likely a Laying-Worker.

I hived a small after-swarm in July, which has been building up very slowly. This morning I noticed a number of dead bees in front of the hive, and on examination I found a capt queen-cell on one of the combs which puzzled me, as they must have a queen, as two of the combs had brood and eggs. The capt brood-cells project like drone-cells, but they seem to be all workers. Some of the brood ready to emerge from the cells were dead. The eggs in the cells were laid very irregularly, some cells contained one, two, and some three eggs. What is the matter with them? WIS.

ANSWER.—There is a possibility that a drone-laying queen is present, but it is much more likely that you have a case of laying-workers. The bees, you say, are all workers. That's because the brood has not yet begun to hatch. As soon as the young bees begin to come out of their cells, you will find all drones. The best thing you can do is to break up the colony and distribute the bees and combs to other colonies.

Colony With Laying-Workers.

We had a colony that cast a swarm, May 25, 1899, which we hived in a Simplicity hive. About ten days later we lookt into the hive and found the colony in first-class condition, with plenty of brood started, and it being just in the middle of the white clover flow we put on an Ideal super at once. About July 25 we took off 13 pounds of honey; the colony was at that time in apparent good condition, but we did not examine the brood-chamber, and yesterday (Aug. 22) we went to the yard to put on supers, when we noticed that this colony had decreast in population, and on examination of the brood-chamber we found the following condition:

Colony queenless, with no eggs, nor larvæ in worker-cells, but an extra amount of drone-comb, and in that we found plenty of eggs and larvæ in all stages, even some already capt, and on that *drone-comb* were seven *queen*-cells, two of them already capt, and the others well advanced with larvæ in them. The brood-comb was scatteringly filled with pollen and honey, but no eggs nor larvæ. Please do not overlook the fact that those queen-cells are built over *drone-cells* only. ILLINOIS.

ANSWER.—You have a plain case of laying-workers. Sometimes it is hard to say whether laying workers make the trouble or a drone-laying queen, but when, as in the present case, eggs and brood are found in drone-cells and none in worker-cells, then you may be sure of laying-workers. The bees seem to know that all is not right, and make desperate efforts to secure a queen by trying to rear one from the only kind of brood they have—drone-brood—but it is all of no avail, and you will find nothing but drone-brood in those queen-cells, which will probably die in the cells. When they are so anxious to have a queen as to try to rear one from drone-brood, one would think they would be glad to accept any queen offered them, but with a strange perversity they almost invariably refuse the best queen given, unless it be a virgin queen that has just emerged from the cell. The workers are advanced in age, and will die off rapidly, so on the whole the best thing you can do is to break up the colony, giving the bees and combs to other colonies.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

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118 Michigan St., Chicago, Ill.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. SEPTEMBER 7, 1899. NO. 36.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: —Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Philadelphia Convention will have about closed when the majority of our readers receive this number of the American Bee Journal. This week we give the pictures of the officiary of the United States Bee-Keepers' Association. On the first page are the Executive Committee—the three officers that have in charge the management of the annual conventions. Then follow the Board of Directors and the General Manager. Mr. Whitcomb is the only one who is doubly honored, being the president as well as director. We think the whole nine make a fine looking group—a body of men of whom American bee-keepers may well be proud.

Bee-Keeping at Experiment Stations is a subject that Mr. Abbott touches on in another column. And he is right in saying that this intensely interesting line of work is practically ignored by the majority of experiment stations and agricultural colleges in this country. You will find that dairying, sheep-raising, fruit-growing—in fact, nearly every other industry under the sun receives more or less attention, but bee-keeping—well, it doesn't seem to be "in it" at all.

In view of the close relation and great benefit of bees to horticulture, and their importance in the production of so many things grown on the farm, one would think that the care of bees would receive attention at every experiment station and agricultural college now in operation. Perhaps if bee-keepers would appeal to those in charge of these institutions, the subject of bee-keeping might be taken up, as it very properly deserves.

Thick Sections.—Mr. Hutchinson, in his Bee-Keepers' Review, has this paragraph on thick sections:

"Page & Lyon made some thick sections to order for two bee-keepers of Wisconsin. The sections were one-sixth of an inch in thickness. This extra thickness so increast the weight of the sections that when they were filled with honey and sold the extra weight would pay for the sections. They also made some nailed sections for a York State bee-keeper, in which two of the sides of the section were of hard maple, five-sixteenths of an inch in thickness. In talking this matter over with a lady bee-keeper, she exprest the opinion that such practices were dishonest, if done for the sake of cheating the ones who bought the honey stored in such sections.

We quite agree with the lady who prefers to get as little wood as possible when buying honey in sections. A certain good mother-in-law that we once knew, used to tell her butcher that she preferred to have no bones in the meat she bought, as she "*couldn't eat bones.*" Neither can most people eat wood.

We see no excuse for using thick sections; unless the honey is to be sold by the section instead of by the pound, then it would be all right to use them.

Honey in Uintah Co., Utah.—In a newspaper sent to us by Mr. G. W. Vangundy, we find the following referring to the apiarian possibilties in that region:

"If there was ever a land that literally flowed with milk and honey Uintah County is certainly entitled to that cognomen. Think of a comparatively small settlement shipping out of its borders ten carloads of extracted honey! Startling as the statement may seem at first, it is none the less true that such is the expectation this summer and fall. The place is simply a paradise for the bees. Last year Jos. Hacking alone produced and shipt 36,000 pounds of honey, while the Burkett Bros. and Mr. Merley each shipt almost as much. There is great money to be made there in the honey-business."

"Know Your Honey-Resources" is a text upon which G. M. Doolittle frequently preaches. S. P. Culley, of Lafayette Co., Mo., in the Progressive Bee-Keeper, emphasizes the importance of knowing what flowers yield in one's locality, and when they yield. Twenty years ago his locality furnisht little or no white clover. The best flow was to be expected from the latest sumac. He says further:

"But white clover is now abundant, and furnishes a flow in May and June to take the place of the flow sumac formerly gave July 15 to Aug. 15; and just here who will contend that this change from sumac to white clover, from harvest in mid-July to May and June, does not make necessary very important changes in management? Then early brood-rearing was not important; now it is all-important. Then the bee-keeper needed to see to it that his colonies had bushels of bees by July—an easy task; now he wants them strong by May 25—a thing far more difficult."

Honey Exhibits at Fairs is a subject upon which Mr. D. W. Heise, of Canada, wrote a paper for the last meeting of the York County Bee-Keepers' Association. Mr. H. calls attention to some valuable advantages to be gained by such exhibits, among which we wish to call attention to the following:

A pleasing feature is noticeable in selling honey at fairs, inasmuch as a very large percentage of it is sold to parties who rarely come in contact with honey at any other time. Thus an increast demand is created without in any way affecting the producers' establisht trade; and it also diverts a considerable amount from the large city markets, the flooding of which always has a demoralizing effect on the price of honey generally.

In no other way can honey be brought so prominently before the public attention as by a large and creditable display at fairs. Especially will this apply to the larger exhibitions in the provinces, such as Ottawa and Kingston in the east. Toronto more central, and London in the west, where hundreds and thousands of consumers come face to

face with a sweet reality, the product of the bee-keeper thru the aid of his thousands of busy workers. A desire is created within those who have never used honey, to sample the delicious-looking sweets, which usually results in a purchase being made, thereby creating an appetite and a demand which it would be difficult to accomplish in any other way.

Now a few words as to the injury that may be done to the bee-keeping industry by unwise practice on the part of an exhibitor. Knowledge has come to some of us that certain indiscreet honey-producers make the fairs a dumping ground for the inferior part of their crops. This practice, if permitted to be carried on extensively, will certainly tend to very much injure the reputation as well as materially lower the price of good honey. Only the very first quality of honey from the different sources should be permitted for sale on the grounds of any public fair.

Convention Reports are discust with wisdom by F. L. Thompson in the Progressive Bee-Keeper. He refers to the too common error of saying that such and such a topic was handled in an interesting manner, but that is of no value so long as the important part—the matter of the discussion—is left out. One trouble is that the secretary has so much to attend to that it is impossible to give a full and reliable transcript of the discussions. Some one should be appointed whose duty it is to report the discussions, and to do nothing else. He should not try to write out in full what is said, but use catch-words and catch-phrases, always using a lead-pencil, writing out his notes soon after the meeting.

Extracted Honey Tare.—According to W. A. H. Gilstrap, in Gleanings in Bee-Culture, a vigorous and somewhat effective protest has been raised against the practice of deducting as tare a number of pounds exceeding the actual weight of the honey-packages. The actual weight of the wooden case is usually taken, but some practice deducting 3 pounds for each tin can containing 60 pounds, when the actual weight is only 2½ pounds. On the San Joaquin valley crop (California), estimated at 150 cars, that makes a difference of 20,000 pounds. Right is right, and bee-keepers should insist on deduction of actual tare.

Good Yields of Honey.—In an interview with S. A. Niver, reported in Gleanings in Bee-Culture, he says his average for five years—a year of almost total failure included—has been between $6.00 and $6.25 per colony. His best colony, last year, gave 175 finisht sections, which brought $19.25. He says Mr. Coggshall figured up 116 days' work during the year 1897, and sold 78,000 pounds of honey, which Editor Root figures up at $20 a day, if the honey brought only 3 cents a pound, or $27 at 4 cents a pound. Now Mr. Coggshall has gone to a sanitarium for treatment and *rest*.

Cogitator will not cogitate any longer for the American Bee Journal. Mr. E. E. Hasty, of Richards, Ohio, will hereafter furnish the "Afterthoughts." For many years he reviewed the bee-papers for the Bee-Keepers' Review, so he has had much experience as a writer on apiarian topics. We feel certain that his addition to our editorial staff will be welcomed and appreciated by all the readers of the old American Bee Journal. We fully expect that Mr. Hasty will equal Cogitator in his "afterthoughting." A fair sample of his work is given in this number.

The Philadelphia Convention Report we expect to begin to publish very soon after the meeting, or just as soon as Secretary Mason can furnish us with the copy. A full shorthand report will be taken, so our readers may confidently look forward to a feast, as the program is one of unusual interest. We can say this with a clear conscience, as our name is not on the program anywhere.

THE AUSTRALASIAN BEE-KEEPER is a new bee-paper just launcht by Pender Bros., in New South Wales, Australia. It is a neat publication, and makes a creditable appearance. Mr. W. S. Pender, who was in this country last winter, is its editor. We wish the "new baby" a successful career.

* * * * *

MR. G. W. NANCE, of Woodbury Co., Iowa, wrote us Aug. 21, that on Aug. 7 his honey-house was struck by lightning and burned to the ground, the loss being about $400, with an insurance of $240 on the house and bee-supplies. We regret to learn of Mr. Nance's loss, but congratulate him on his good fortune in having had it insured.

* * * * *

MRS. JOHN J. GLESSNER, of Chicago, who is now at her summer home in Grafton Co., N. H., writing us Aug. 16, said:

"The honey crop is poor here, but the care of bees grows more fascinating. I received a queen in good condition, and safely introduced her to a colony of Carniolans. I like the Italians best. I have my own little way of introducing queens, and am very successful."

* * * * *

MR. G. W. VANGUNDY, of Uinta Co., Utah, wrote us Aug. 13 that his locality would have only two-thirds of a crop of honey this season. Some time ago we announced in this column that the firm of E. A. Beers & Co. would represent the bee-keepers of Uinta County in the marketing of their honey, but Mr. Vangundy informs us that any one of the officers of their local bee-keepers' association is abundantly able to attend to the selling of their crop, and that the association is getting along very nicely. It is expected that all their members will soon unite with the United States Bee-Keepers' Association. Just the thing to do.

* * * * *

MR. STENOG—the one who furnishes the "Pickings" for Gleanings in Bee-Culture, from their "neighbors' fields"—wrote this paragraph, referring to some letters in the American Bee-Keeper:

"Mr. Hill continues his interesting letters from Cuba. The insects of that island lead me to believe that a hybrid climate like ours, where Jack Zero reigns a good deal of the time, is preferable to one of perpetual heat."

We presume that means Stenog prefers Heaven to the "other place," where it is said that the "heat" is not only "perpetual," but hot boiled down.

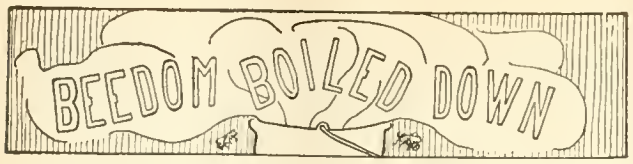
* * * * *

E. R. HAYES, of Topeka, Kans., seems to deserve a free advertisement. The following is given in Gleanings in Bee-Culture, and we are quite willing to "pass his name along:"

"We regret to be obliged to warn our friends against sending any honey to E. R. Hayes, of Topeka, Kan., or trusting him in any way. D. S. Jenkins, of Colorado, sent him a lot of honey last October. Hayes said, when Mr. J. offered the honey, "I will send my draft on arrival of goods." Since then Mr. Jenkins cannot get a word from him, and we have written to Mr. Hayes twice, the last time telling him we would publish him unless he made some sort of answer; and altho we have given him several weeks' time to make a reply, we cannot get a word from him in any way, shape or manner. Will the other journals please pass his name along unless he can be made to talk, or give some reason why he does *not* talk."

We might also add the name of H. P. Robie, of Sioux Falls, S. Dak., to the list of those who defraud bee-keepers by getting honey and refusing to pay for it.

The Premium offered on page 572 is well worth working for. Look at it.



A Bee-Veil Long Enough being askt for in Gleanings in Bee-Culture, Dr. Miller advises sewing the veil to the edge of the hat-brim, thus making the veil come down farther than if fastened around the crown of the hat. The editor thinks Mr. Coggshall's plan still better. Have a hat with a very wide brim, and sew the veil to the underside of the brim, but so far from the edge that the veil will be shaded from the direct rays of the sun. The sun shining on the veil makes it especially hard to see thru, the trouble being greatest early or late in the day when the sun is near the horizon.

Are the Dark Cappings of Sections Colored Clear Thru?—Editor Root and Dr. Miller are at loggerheads on this question. Mr. Root says he examined several thousand pounds of honey from different parts of the country, and three-fourths of the so-called travel-stained faces showed on examination that the stain went *clear thru* the capping. But Dr. Miller says he *knows* that a section capt white as snow becomes dark if left on the hive long enough, especially in the center of the super, and asks, "Now, don't you believe the white capping still remains white, with a dark coating over it?"

The Royal Palm as a Honey-Plant.—Mr. Snyder having called attention, in the Bee-Keepers' Review, to the fact that Mr. Somerford had reported royal palm as yielding a surplus, while Mr. Poppleton had reported it as not yielding a surplus, Mr. Poppleton says the difference between the two is more seeming than real. Mr. Poppleton's experience of two years in Cuba was in what he considered a largely overstockt locality, 400 or 500 colonies being in the one apiary. During the time of bloom of royal palm only a few colonies stored surplus, while Mr. Somerford, in a region less densely stockt, might have found a good surplus stored from the plant.

A Trap for Honey-Loving Bears.—Editor Hill thus describes it in the American Bee-Keeper:

"It is simply a strong box, about 14 inches deep and 10 inches square, with a number of 3-inch light wire-nails driven thru and inclined downward from the outside. Then a piece of comb honey is placed in the bottom, and the arrangement left at some convenient place. The bear, it is said, will thrust his head to the bottom after the sweet morsel, but when he attempts to withdraw it, he finds he has a nightcap that persists in being worn thereafter, and the bee-keeper finds him tumbling about, thus blindfolded, when he arrives in the morning.

Bees Crossing Larvæ for Queens.—Dr. Miller and the editor of the Bee-Keepers' Review are at a dead-lock with regard to the age at which bees choose larvæ for rearing queens. The former insists that when a queen is removed the bees choose larvæ sufficiently young, but continue to start cells for several days, and then they use larvæ that are too old, not from choice, but because no younger are present. He asks Editor Hutchinson to make fresh trial and report results. This Mr. H. politely declines, but says: "Let me tell you just what I do know about this matter. I know from a great number of trials that when bees are given larvæ of all ages from which to rear queens, that some of the queens are very poor; while if given only eggs, or just-hatcht larvæ, all of the queens are good."

Doolittle Queen-Cells—two dozen of them—make a full-page illustration in a recent issue of Gleanings in Bee-Culture, upon which the bee-keeper would gaze for a long time. The picture is a fine one, and the cells are fine, of that kind from which the experienced bee-keeper will confidently expect fine queens. They were reared in a hive of one story, a laying queen being in the hive all the while. But the hive was separated into three compartments. The central compartment was the one in which the cells were produced, the queen not being allowed in this central compartment, but alternately in either of the two outside compartments, the workers having the free run of the compartments by means of division-boards furnisht with perforated-zinc. The central compartment had a capacity of three frames, on either side of the frame of cells being a frame of young larvæ. Preference seems to be given to cells fastened on a stick as compared with those fastened on the lower edge of a comb. When a larva is put into a cell, there is placed at the same time in the cell a bit of royal jelly about as big as a double-B shot. The jelly should be of the right age, an ordinary natural queen-cell of two or three days' growth furnishing jelly for six, and sometimes for twelve cells.

Moving Bees Short Distances.—Dr. Mason says in the Bee-Keepers' Review that when bees are moved several miles they do not return to the old location, not because of the distance they have been moved, but because of the disturbance in moving. So for 25 years he has made a practice of disturbing bees when moving them only a short distance, after the plan given by E. R. Jones, and has never made a failure till this year. When the Doctor wants to move bees a short distance, he closes the hives with wire-cloth, and if not ready to move them at once, he sets them in the shade for half a day or longer. Then he puts a colony on a wheelbarrow, wheels it back and forth on the sidewalk, whose unevenness keeps up a constant jar, till he has wheeled it 40 rods or more, then puts it where he wants it, and it stays put. But this year he says the plan was a flat failure.

Virgin Queens and Drone-Comb.—On page 403 of this journal, C. P. Dadant says that queenless bees to which a queen-cell is given will build nothing but drone-comb till their young queen is laying. Critic Taylor says in the Bee-Keepers' Review that such is not his experience. He examined a number of nuclei in which eggs were not yet hatching, and in one at least there were yet no eggs, and found all the new comb entirely worker. Thinking the strength of a colony might have something to do with the case, he put a swarm with a virgin queen in three sections of the Heddon hive, the swarm being strong enough to crowd the three sections, and five or six frames in the upper section were largely devoid of comb. This was in the midst of a moderate basswood yield, and he says: "Now the frames mentioned are almost entirely filled with comb, and not a sign of drone-cell anywhere; and the queen is not yet laying." It will be interesting to discover whether there may not be some difference of conditions not yet fully understood that may account for the difference in observations.

Carrying Swarms on a Bicycle.—I have secured swarms of bees in sacks, and carried them on a bicycle. It sometimes happens that a farmer will say a swarm of bees is hanging on a limb a mile or so from the office. It would hardly pay to send a man with a horse and buggy; but with a bicycle and cheese-cloth sack I can very soon have those bees back home and in a hive. The sack should be carried by the upper end, where it is tied. Before the sack is tied, however, the bees should be shaken down to the bottom, and then the string should be secured four or five inches above the mass of bees. I usually carry the sack in one hand, and guide the bicycle with the other.

A year or so ago there appeared an account of how a very enthusiastic youth, seeing a swarm of bees remote from his home, was particularly anxious to secure the bees and take them. What did he do but remove his "pants," tie the legs of them together, shake the bees into them, and rush home? No mention of the fact is made of *how* he got home, or whether he was stung or not, or whether he met any one on the way; but the fact was clearly brought out that the bees were *hived*, and finally developt into a prosperous colony.

Taking this incident as a cue, I do not see why we cannot use the cheese-cloth sack in the manner I have described. The body of the sack can be slipt clear up over the cluster of bees as they are hanging on the limb; and, if more convenient, the mouth of the sack can be tied around the limb so as to make it bee-tight; the limb can be cut, and our bees brought home in triumph.—Gleanings in Bee-Culture.

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and very thoroly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

Root's Column

HONEY WANTED.

We are in the market for both comb and extracted honey. If you have any to offer, let us hear from you AT ONCE stating the grade, number of pounds of each grade, from what source gathered and HOW it is put up. If extracted, send a sample by mail. . . .

We Handle

Several Carloads Every Year....

and may be able to refer you to a buyer if we cannot handle it ourselves. . .

See our ad in this column for July 6th issue for

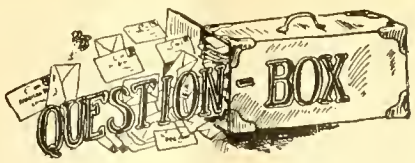
Honey-Packages...

Five-gallon square Cans are now $8.00 per ten boxes instead of $6.00.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.



In the multitude of counsellors there is safety.—Prov. 11-14.

The Style of Hive Preferred.

Query 102.—What make or style of hive and super do you prefer? Why?—WEST.

Prof. A. J. Cook—Langstroth. Most use it.

Dr. J. P. H. Brown—I use a modification of the Langstroth hive.

Emerson T. Abbott—The "St. Joe." Because it is made to suit *me*.

C. H. Dibbern—1. The Dibbern. 2. Because it suits *me* better than any other.

Mrs. L. Harrison—Eight-frame Langstroth, with Heddon case. Because it's good enough.

D. W. Heise—Langstroth length. Quinby depth; super same. "Why?" Gives me better results all around.

W. G. Larrabee—Langstroth 10-frame hive, and 16-pound slatted-bottom super. Because I like it the best.

E Whitcomb—Any make with movable frame. For the reason that about the same results are attained, with the same care.

J. M. Hambaugh—Ten-frame Simplicity, because it combines more desirable features, in my estimation, here in California.

E. France—I prefer a quadruple hive, with Langstroth frames. There is better winter protection when wintered out-of-doors.

O. O. Poppleton—I prefer what is known as the Long-Ideal hive, with no super. This is mainly for obtaining extracted honey.

Rev. M. Mahin—The one I use, but I cannot describe it here. In several features my hives and supers are peculiar to myself. They just suit me.

Eugene Secor—I use the 8-frame Langstroth hive with super to match, both the T and the open frame to support sections. Separators preferred in all cases.

R. C. Aikin—T super or a compression super without T's or slats, separators to support sections; square-joint hive as in dovetailed; brood-chamber a flattened cube.

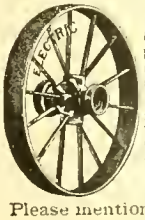
Jas. A. Stone—Improved Langstroth-Simplicity, because I think it is the easiest to manipulate and as simple in construction as I think it possible to make a No. 1 hive.

Mrs. J. M. Null—For comb honey and cellar-wintering B. Taylor's, or Heddon's divisible, or 8-frame hives. For out-door wintering bees do better in deeper frames.

G. M. Doolittle—My own. Because—because—well, any of the good hives on the market will give good results if there is plenty of brain, muscle and push behind them.

Dr. C. C. Miller—I don't know, as yet, how it may be about some of the new supers, but as yet I like the T super and the dovetailed hive. Too long a story to tell why.

J. A. Green—A modification of the Heddon hive, made by myself (none for sale), with super containing what are known as



A Good Wagon

begins with good wheels. Unless the wheels are good the wagon is a failure. IF YOU BUY THE **ELECTRIC STEEL WHEEL** made to fit any wagon—your wagon will always have good wheels. Can't dry out or rot. No loose tires. Any height, any width tire. Catalog free.

ELECTRIC WHEEL CO.
Box 16 QUINCY, ILL.

Please mention Bee Journal when writing.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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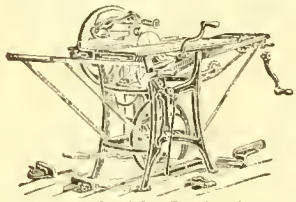

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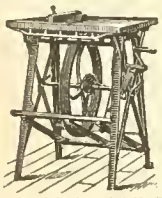

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"section-holders"—single-tier wide-frames with tin separator nailed on, without top-bar. I adopted these because I thought they were best, and I have seen no reason to change my mind.

J. E. Pond—I prefer the Simplicity Langstroth hive, with ⅞-inch wide super, of a size that four will fit a frame 4¼x4¼x1⅞. I do not know that there is any great choice in supers, except they should be of convenient size.

R. L. Taylor—The Heddon. Because with it I can most conveniently suit the size of the colony—give a small brood-chamber to a swarm—and get along with very little handling of frames, without any offsetting disadvantage.

P. H. Elwood—The Quinby-Hetherington hive. It is best to move; best to find queens in, because the light floods all parts and there are no hive-corners for queens to hide in. I have yet to find a hanging frame that I can manipulate as quickly.

Mrs. A. J. Barber—Eight-frame dovetailed with section-holders. For one reason, they are small enough so that they are not too heavy to handle. I have used them more than any other, and they seem more convenient than any other to me.

Dr. A. B. Mason—Langstroth. Because I like it better than any other I have tried. I produce extracted honey and use same size combs in the super as in the brood-nest. Occasionally, I produce a little comb honey, using either the T super or section-holders with fence separators.

G. W. Demaree—I prefer the modernized Langstroth hive, with duplicate story for taking honey with the extractor, and the T tin support section-cases, for comb honey. In the Middle and Southern States the 10-frame hive is best, while in the North the 8-frame size may be used with good results.

C. Davenport—Nearly all the frame hives I have in use are made on the same principle as the dovetailed, because it is the handiest, most convenient, and most practical hive I know of for a single brood-story hive. I am using various kinds of supers, but am not satisfied with any of them.

S. T. Pettit—I can answer better by giving the size of frame and number used. If I were starting again I would make my hive a little longer than it is. I would make the frames 15 inches long, 9½ inches deep, and 12 in each hive. Reason: More room for supers, and gives long entrance for ventilation. Many hives now used are too small, so I think.

A. F. Brown—For general use the 10-frame dovetail white-pine hive, standard Langstroth size frame, two stories. For comb honey I would prefer the same number and depth of frames, but would reduce the length to about 14 inches. I have used such hives with very satisfactory results. For comb honey super I have used those having section-holders, with wood separators.

Adrian Getaz—My own, of course. For description see American Bee Journal of

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your chicks with machines that leave no doubt of success. A simple, durable and perfect machine is the

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May 6, 1897. The main points are a brood-nest of sufficient size, chaff protection for brood-nest and supers, against both cold and excessive heat. I consider essential that the supers should be protected, so as to keep them warm during the night and thus keep comb-building going on, day and night.

E. S. Lovesy—I use and prefer the Langstroth hive. With all due modesty I have to admit that I like our own make of super the best; it is a super that I adopted three years ago. Myself, Mr. Bouck, Mr. Dudley, and many others are using it here now. It may have been used before, if so I did not know it. It consists of separators and double section-holders so arranged as to completely box in all sections, thus keeping them clean and free from travel-stain.

GENERAL ITEMS

A Good Report.

I began in the spring with three colonies, two fair ones, and one rather poor. I extracted honey from the two good ones, and the third one I workt so that I got seven small colonies out of it. I got in all 200 pounds of extracted honey, and have now 10 colonies. JOSEPH MAYER.

Sheboygan Co., Wis., Aug. 21.

Bee-Keepers Discouraged.

The honey crop in our locality is very small this year. I have taken only 1,000 pounds of comb honey from the carload of bees (100 colonies) that I brought here in June. The bees have increast to 175 colonies by natural swarming, and are in good condition for winter. The fatality among bees in this locality last winter and spring I think was fully 90 percent, and bee-keepers are discouraged. I. A. TRAVIS.

Wood Co., Wis., Aug. 21.

Very Poor Season for Bees.

My bees have stored no honey since Alsike clover bloom, and there is but little hope of their getting winter stores. Spanish-needle, goldenrod and boneset—our only show for fall honey—are all in bloom, and I yet have to see the first bee on any of it. S. W. SMILEY.

Lincoln Co., Mo., Aug. 28.

Hunting Bees in Trees.

In giving my way of bee-hunting, on page 499, I failed to give my method of starting bees when they cannot be found on flowers. First go to a place where you think there are wild bees; build a fire, into which throw stones, and when they are heated take to the side of the woods where the wind will take the smoke into the woods. Then take three sticks of wood about five feet long, and set them up in a triangular form and place the bait on the vertex; put the heated stones below the bait, then drop some honey on the hot stones, or sugar will do, and the fumes will attract bees, if there are any in the vicinity.

I guarantee this method to catch them every time. SAMUEL VARNES.

Coshocton Co., Ohio.

Too Wet and Too Dry.

EDITOR YORK:—I am a bee-keeper in a small way, so I thought I would join your throng of writers who have something to say. Bees are not a success with us this year. The early part of the season was too wet, and now it is too dry; even the buckwheat is drying up, without giving the poor bees half a chance. And as far as many of my bees are concerned, they will

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ROMEO, Mich., July 10, 1899.

MR. QUIRIN—Dear Sir:—The queens you sent me have turned out the yellowest bees in my apiary, are gentle to handle, are large and well markt. C. C. CHAMBERLAIN.

BLOCKLY, Iowa, July 5, 1899.

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34A10t Money Order Office, BELLEVUE.

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have to gather in stores from the house, that they laid by a year or two ago, which will be given them in a rather thin honey syrup put in pans, into which plenty of clean cobs are thrown for the bees to stand upon while sipping the sweet; and they will soon empty the pans. It is surprising how quickly they will do the work.

When it was time for the bees to work in the spring I had 14 colonies left out of 45 wintered over. That was spring dwindling in earnest, for nearly all left a good quantity of honey in the hives, so they had no need to starve, tho according to some writers they might have done so. I now have 22 colonies. MARY E. ALLEN.

Manistee Co., Mich., Aug. 24.

Bees Not Making a Living.

Bees are not making a living around here this fall. There is no buckwheat, and white clover didn't yield any honey to speak of. L. J. BEROH.

Dane Co., Wis., Aug. 24.

Bees Doing Well.

Bees are doing well. I took off the first super of buckwheat honey yesterday, making 75 pounds for that colony—clover 55 pounds, and buckwheat 20 pounds.

L. C. SALSBURY.

Bradford Co., Pa., Aug. 20.

Prospects in Nebraska.

Our winter losses last winter were fully 50 percent, which was about made up by swarming this season. So far we have had but little surplus honey, and will have no more than enough to supply the home demand.

Our best honey-plants were badly winter-killed. White and red clover and boarhound suffered the most. Basswood, altho it bloomed profusely, yielded very little honey, and our principal dependence for the fall run—heart's-ease—is giving us very little yield on account of the extremely hot weather.

I see so much said in the Bee Journal about foul brood. I have kept bees 20 years, and handled on an average 500 colonies annually, and never had a case; in fact, I have never seen foul brood. We have had a few cases of paralysis, but can usually soon cure them by the methods spoken of in the Bee Journal from time to time. J. L. GANDY.

Richardson Co., Nebr., Aug. 24.

A Canadian's Report.

I am well pleased with the Bee Journal, as I take quite an interest in bees. I had eight colonies in the spring and now have 16 strong ones. I have been bothered a little with after-swarms. I have been taking off the queen-cells, and I think they will give up the notion of swarming now. I use two-story chaff hives with eight brood frames. I have 800 pounds of honey now. The way I keep the bees working is to put all extracting-frames on about the middle of May, and when they are full I extract them when about half the honey is sealed over. The swarms I hive on foundation in brood-frames and if the weather is hot I put the sections on. Whatever they get above their needs I take. I always take the queen-cells off the eighth day after the first swarm has issued. My bees are Carniolans and blacks. P. A. BARR.

Ontario, Canada, Aug. 21.

Bees Doing Well.

My bees are doing well, at least they appear so to me. From eight colonies spring count I have increast to 19, losing three or four swarms by their decamping. I have sold some 300 sections of white clover honey at 15 cents per section, and I expect three or four hundred more. I have several styles of hives in use, and three styles of sections. They all have points of advantage and disadvantage. I may give them some time. There are difficulties that I may be able to overcome. For instance, the 4x5x1⅜ section gave me lots of annoyance to start with, and I have not entirely gotten over the idea that they are ⅛ inch too thin yet. My trouble was to get the

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A heavier and stronger knife than the one we offered heretofore.)

THIS CUT IS THE FULL SIZE OF THE KNIFE.)

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The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

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Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife. We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

foundation exactly in the middle, so the bees would build cells on both sides of the foundation and cap them over. A full sheet gave the best filled sections; starters were good, except scant at the bottom, but nicely filled if turned over at just the right time. But I want full sheets, then the cells are all alike, otherwise the starter will be worker-cells and the rest of the section is apt to be drone cells, and looks coarse.

Sioux Co., Iowa, Aug. 22. F. W. HALL.

Little Surplus from Alfalfa.

Bees are working for dear life on buckwheat Should we get another rain they will be fixt for winter stores; otherwise they will have to be fed. There was very little surplus from alfalfa. S. HARTER.

McPherson Co., Kan , Aug. 23.

Time to Plant Bulbs.

"This is the season of the year in which to set out bulbs. Prepare the ground for them before they are received by having it dug up to a depth of at least a foot—a foot and a half is better—and workt over until it is mellow," writes Eben E. Rexford in the September Ladies' Home Journal. "Mix with it a liberal quantity of old rotten manure from the cowyard, or, if this is not obtainable, use bonemeal in the proportions of one pound to a square yard of soil. If the soil is naturally heavy, it is well to add considerable sand to make it lighter and more porous. Plant the bulbs as soon as possible after they are received, as they are greatly injured by exposure to the air. Set tulips and hyacinths six inches deep, smaller bulbs from four to five inches. All bulbs should be placed five or six inches apart, and each kind kept by itself."

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Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

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Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

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York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00 For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Aug. 19.—A few consignments of comb honey received this week, some cases of fancy in plain sections sold at 15 cents, other lots at 13@14 cents, while No. 1 sold at 12@13c; amber grades, 10@11c; dark, 7@9c. Extracted, white, 7@8c; amber, 6½@7½c; dark, 6c. All selling well. Beeswax, 25@26c.

R. A. BURNETT & Co.

KANSAS CITY, Aug. 10.—The receipts of honey are light, demand fair. We quote: Fancy white comb, 15c; No. 1, 14c; No. 1 amber, 12@13c. Extracted, white, 6@6½c; amber, 5½@6c; dark, 5@5½c. Beeswax, 22@25c.

C. C. CLEMONS & Co.

NEW YORK, Aug. 22.—Demand good for new crop comb honey, excepting buckwheat. We quote as follows:

Fancy white, 14@15c; No. 1 white, 12@13c; fancy amber, 11c; No. 1 amber, 10c. Extracted firm at unchanged prices. Beeswax dull at 25@26c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾. light amber, 6½@7c. Beeswax, 26@27c.

Market is firm at unchanged quotations, with demand fair and offerings light. The last Panama steamer took 312 cases extracted for New York. The ship Centesima sailed with 349 cases for Liverpool; another took 4,000 lbs. beeswax.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c.

A. B. WILLIAMS & Co.

BOSTON, Aug. 18.—Fancy white comb, 1-pound sections, 15@16c; A No. 1, 14c; No. 1, 12@13c; No. 2, 10c. Light amber extracted, 7c. Beeswax, 27c.

The demand for honey is very light, as is usual this time of year. While stocks are extremely light, the old being practically gone, and no new as yet. Owing to poor crop prospects prices are firm, and it looks as if they would remain so. BLAKE, SCOTT & LEE.

BUFFALO, Aug. 25.—Receipts of fancy new 1-pound combs are very light, selling at 13@14c; fair to good, 10@12c; low grades less. Advise moderate shipments for the present. Some fancy beeswax wanted at 28@30c.

BATTERSON & Co.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.

PEYCKE BROS.

DETROIT, Aug. 19.—There has been no offerings of new honey and old is fairly well cleaned up. Fancy white we think would bring 14 cents, other grades proportionately cheaper. White extracted, 7@8c; no dark to quote. Beeswax in good supply at 25@24c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free.

Italian Queens.

4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

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which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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To say to the readers of the BEE JOURNAL that

DOOLITTLE...

has concluded to sell QUEENS in their season during 1899, at the following prices:

1 Untested Queen ..$1.00
6 Untested Queens.. 4.50
12 Untested Queens 8.00
1 Tested Queen 1.50
3 Tested Queens.... 3.50
1 select tested queen 2.00
3 " " Queens 4.00

Select Tested Queen, previous season's rearing, $3; Extra Selected, for breeding, the very best, $5.00. About a pound of Bees in a 2-frame Nucleus, with any Queen, $2.00 extra.

Circular free, giving full particulars regarding each class of Queens. Address,

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Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.

What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation:

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Portland Seed Co .....Portland, Oregon.	J. L. Gray .....St. Cloud, Minn.
E. T. Abbott,.....St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co. .....Sheboygan, Wis.
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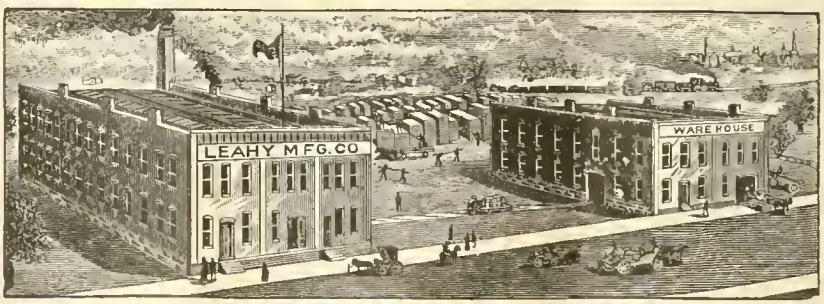

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., SEPTEMBER 14, 1899. No. 37.

CONTRIBUTED ARTICLES

Rearing Queens in Full Colonies—Starting Cell-Cups by Natural Methods.

BY HENRY ALLEY.

FOR a good many years I have had no trouble in getting all the cell-cups made that I needed, and in a way most natural for bees to construct them. This is the way I do it:

We will suppose that there are eggs or larvæ properly matured, from which bees will start queen-cells. The right age of eggs for this purpose is about 84 hours, reckoning from the time the eggs were deposited. Now, there is but one way to compel bees to start cell-cups, and that is by making them queenless. My way of preparing bees for this work is this:

I have a box, a duplicate of the regular brood-nest a full colony occupies, to the bottom of which is nailed wire-cloth. Over this wire, at the ends, are nailed ⅞-inch cleats to keep the bottom of the box above anything it is resting on, so that the air can be admitted freely at all times. A frame cover is made, and that also is covered with wire-cloth. When ready for the bees I take the cover of the box and go to any strong colony in the yard, remove the sections or whatever covers the frames, and place the wire cover on the hive. Then the bees are smoked at the entrance to drive in as many as possible, and also cause them to fill their sacs with honey. I also drum lightly on the hive. Now, to put the bees in such a condition that they can be brusht from the combs into a box, and not all take wing, I use a small amount of tobacco-smoke. I will say plainly that this boxing-up of bees as above cannot be done without the use of *tobacco* smoke. If rotten-wood smoke is used, nearly all of the bees will take wing and be in the air quickly; but the tobacco-smoke puts them in just the right condition to be handled to your liking. In fact, they can be handled about as conveniently as so many beans. When the queen is found, the cover is placed on the box, and the bees left alone for several hours, or until they fully realize their queenless condition. Then the eggs are given them in this way:

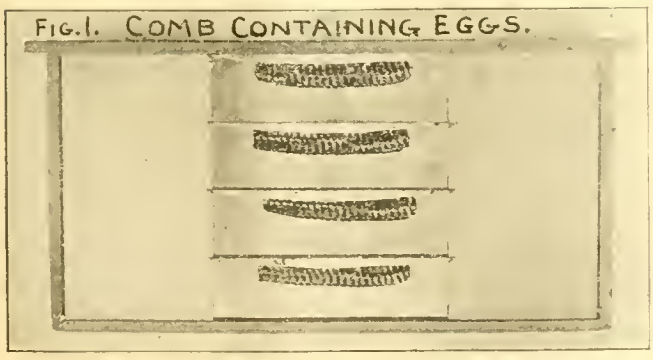


FIG. 1. COMB CONTAINING EGGS.

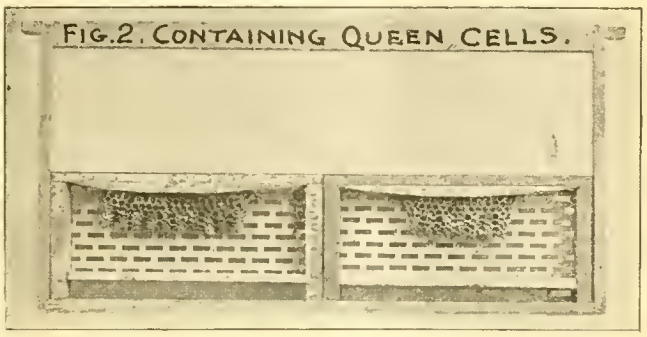


FIG. 2. CONTAINING QUEEN CELLS.

Cut from any brood-comb, containing eggs that have just hatcht, a piece about 4 inches square. Cut this piece in strips, running a knife thru alternate rows of cells. Cut off about half the depth of the cells, and insert the fire end of a common match in each alternate cell, twirling it between the thumb and finger, thus destroying the eggs. Have at hand a shallow pan containing equal parts of beeswax and resin made quite hot over a kerosene-stove, and dip in the mixture the edge of the comb in which the eggs *have not been destroyed*, and quickly place it on a stick, as represented in Fig. 1. The illustration shows a standard frame in which are two pieces of wood having a space of 7½ inches between the pieces. The strips should be cut 7¼ inches long, and are kept in place by cutting notches in the wood ⅛-inch deep, using 4 pieces of wood to each frame, as shown in the illustration. On each piece of wood a strip of comb is placed. Two of the frames, containing 8 pieces, are placed in a hive having no bottom or top. The hive is then filled with combs containing honey and pollen, *but not a particle of unsealed brood;* in fact, no brood at all should be used. Now jar the bees down to the bottom of the box by a sudden strike on the floor, and quickly place the one containing the combs over it and put on the cover. The bees will at once run up and take possession of the combs. If this is done in the morning the bees can be placed at night on the stand they previously occupied, and at once be releast. I first place a bottom-board on the stand, and then raise the hive and place it thereon. By being careful, no bees are crusht. Many bees rush out and will take wing, but no harm will be done, as they soon return and enter the hive.

While the bees are confined after being given the eggs they must be supplied with water, and kept in a cool place, and in the course of 24 hours a cell-cup will

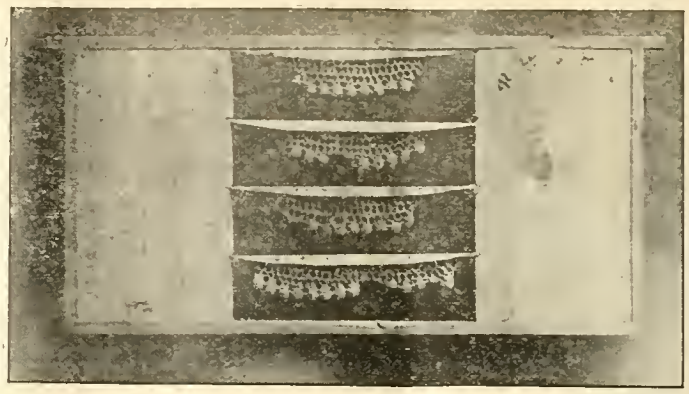
be started around each egg given them. Let the bees work on the cell-cups from 36 to 48 hours, after which they should be placed in colonies *having a queen not less than one year old.*

Fig. 2 represents another standard frame. One-half of this frame is filled with wood, but, unlike the one described in Fig. 1, the wood is nailed in the upper half of the frame, and not at the ends, as in No. 1, as will be seen. One side of the open space is covered with wirecloth, and two smaller frames are used in this frame, having one of their sides covered with perforated metal firmly nailed to the wood. These frames are just $7\frac{1}{2}$ inches between the vertical pieces, and are notcht at the top so the strips of wood to which the cell-cups are made are held in place. The cell-cups are removed from frame No. 1, and then placed in the smaller frames, which are then inserted in frame No. 2, with the open side toward the wirecloth; then the frame is placed in the center of a powerful colony of bees, and *always* between two frames of brood. The result is, in three days more there is as fine a lot of queen-cells as one ever saw.

Twelve days after the eggs are given the bees, the cells should be transferred to nuclei, or, what I consider much better, to a queen-nursery. I feel bound to say that, by this process, I have produced queens much superior to those reared under the swarming-impulse.

To the inexperienced this method may seem fussy. All I can say is that no one can rear queens without doing much hard, pretty fine and fussy work. There are many fine points connected with the above that one must get acquainted with by actual experience. These particular points cannot be explained in one short article. Catch on to them by experience. That is the proper way to do. The cells illustrated were begun and finisht by bees. There is nothing artificial about them.—Gleanings in Bee-Culture.

Essex Co., Mass.



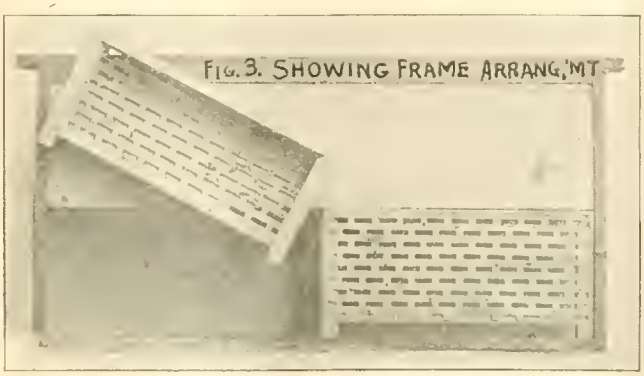
New Swarm Deserting the Hive and Queen.

BY G. M. DOOLITTLE.

A CORRESPONDENT writes: "Will you please answer the following questions thru the columns of the American Bee Journal? I had a swarm come out one day. It clustered and was hived in the usual manner. In the evening the bees slowly swarmed out and went back into the old hive, leaving a small bunch of bees in the new hive. These remained six days when they, too, swarmed out. I found the queen with them. What made the most of the bees leave their queen and go back?"

ANSWER.—The above is one of the most perplexing things which occasionally happen in the swarming season in a large apiary. The general cause is that a few strange bees from another swarm or elsewhere go in with the swarm when they are on the wing or when running into the hive, and for this reason the queen is balled for safe keeping, or for some other purpose just what, I never could determine. Others have told me that is was to prevent the few bees which came in with the swarm, from harming their mother queen, but for some reason there is a lingering doubt about this in my mind. But as I am not satisfied as to the reason, I allow the reason of others to stand till I can prove them wrong.

Where the queen of the newly-hived swarm is thus balled, the bees not finding her running about among their number, seem to think that they have lost her, and so return to the old hive, as all bees of a swarm do when the queen does not cluster with them from any cause like clipt wings, etc., which does not enable her to fly, only in this case the bees balling the queen, and those very near this ball which can catch the scent of the queen, stay with her. If these returning bees are stopt from going home they will scatter into other hives, and are lost by being killed as intruders. I have had thousands slaughtered by their trying to enter into other hives, and soon learned that it was better to let them go home, than have them killed entirely thru my interference.



Sometimes I would hunt out the queen by smoking the ball of bees till they release her, when she was caged and placed between the combs, or hung down from the top-bars of the frames, when no combs were used in hiving the swarm. In about half of these cases this satisfied them, while at other times they would ball the cage, so it would do little if any good.

I now secure the queen as before; but instead of using a common round cage I make a large flat one to reach clear across the frames. Into this I put the queen and lay it on top of the frames, when the bees can reach her thru the wirecloth between every frame in the hive, which always seems to satisfy them. The next morning I let her loose and remove the cage.

ROUND PIECES OF WAX NEAR HIVE-ENTRANCES.

"What is the significance of finding in the morning a lot of little round pieces of dirty-colored wax near the entrance of some hives?"

ANSWER.—So far as my observation goes, the finding of such round pieces signifies that drones are hatching out; or, more properly speaking, emerging from their cells; for, if any one will take the time to examine closely, he will find that the drone, when about to emerge from the cell, bites the cover of the cell entirely off by a smooth cut, while the workers leave only fragments of the cappings of their cell-coverings when they gnaw out. The queen cuts off the capping to her cell the same as does the drone, except, as a rule, a little piece on one side is left, which often acts like a hinge to a door, the "door" often closing after the queen has gone out. Where no such hinge is left, then the caps to the queen-cells are tumbled out of the hive the same as are the drone-cappings, but in no case would there probably be more than four or five caps from queen-cells out in front of the hive on any one morning.

If the little door thus closes, as is spoken of above, the bees often make it fast, so that the inexperienced bee-keeper is often deceived into thinking that the queen has not yet emerged from her cell.

Then, again, it often happens, as soon as the queen has emerged from her cell, that a worker goes into the cell to partake of the royal jelly left in the cell, after which the cell-cover flies back, or is pusht back by the ever-traveling bees, the bees then sticking it fast, when the bee is a prisoner, which has caused many to think that the inmate of the cell was not a queen but a worker; hence they call their colony queenless, sending off for a queen, only to lose her when they try to introduce her.

It is well to understand all of these little kinks in bee-culture, as such an understanding will often pay us largely in dollars and cents.

Some suppose that the round caps spoken of by the correspondent indicate the uncapping of cells of honey, either by robber-bees or preparatory to the carrying of the honey from the outside of the hive to the center thereof; but this is a mistake, as the cappings from the honey-cells

are gnawed off in little fragments, and not in the round form spoken of.

VISITING DIFFERENT FLOWERS IN GATHERING HONEY.

"In gathering honey, do bees visit different kinds of flowers on one trip, or gather honey from one kind of flowers only?"

ANSWER.—From the fact that bees never bring in pollen of different colors in their pollen-baskets at the same time, the idea has obtained that they visit only the same blossoms, or blossoms of the same color, which idea in the main is correct, or very nearly so. Regarding this point I will say that, in gathering pollen, I never saw a bee change from one kind of flower to another, except on the clovers. I have seen bees gathering pollen from white, red and Alsike clover at the same time; but those clovers gave the same colored pollen. When we come to honey I have seen bees fly from a gooseberry-bush to a currant-bush, and from clover to raspberry bloom, and *vice versa*. I have also seen them go from the red variety of raspberry to the black, where the different kinds of bushes were planted side by side, or in alternate rows; still, all that does not prove that bees gather honey promiscuously, for I do not believe they do. It will be observed that all of the above, except from clover to raspberry, were of the same species of plants, or nearly so. Teasel and basswood bloom at the same time; but never, in all of my watching, did I ever see a bee go from teasel to basswood, or from basswood to teasel. Onondaga Co., N. Y.

Some Experience of the Present Season.

BY J. C. ARMSTRONG.

I HAVE kept bees for nearly 40 years, and have come to the conclusion that there are more surprises in the bee-business than in any other in my knowledge. Owing to a cranky neighbor I made up my mind a year ago I would divide my bees and have no more swarming. My bees were very light in stores last fall, and I fed some of the lightest of them. When I put them into the cellar I was fearful that some of them would never come out alive, but luckily they all pulled thru, and out of the 10 colonies I suppose I took out about a gallon of dead bees. I had them in confinement 138 days. They all had a little honey, and some of them *very* little. I thought I must feed them a little till fruit-bloom came, nearly every day, and did so all but two of them.

They gathered up considerable during fruit-bloom, but I could not see what they were to get after that till basswood came, as the white clover was nearly all killed last winter, and I had heard it said that the young clover (and there was an abundance of that) would not afford any honey the first year.

They had by this time become pretty strong, but from the outlook I could not think it a good time to commence dividing. But on May 23 they commenced swarming, and took the matter into their own hands and swarmed, and swarmed. But after basswood was over they seemed to let up a little, and commenced killing off their drones. But within the last two or three weeks they have changed their tactics, and this has been the most lively week with me of the season. They seem to be gathering as rapidly as at any time of the season, and from the young clover. They are booming with bees, send off good-sized swarms, and some of them *very* large. There has been just enough honey coming in, in the scarcest time, to keep the queen laying, with plenty of room to spread herself. I am all "at sea" now. I thought two weeks ago that swarms that came off then would have to be fed for winter stores, but I believe they have now as much as some of them had that I put away last fall. Still, they are stronger in bees than those were, and of course will require more.

I have lost four swarms, and have doubled my number. I had one to leave me to-day. It is a question with me which to do, hive them in empty hives, or destroy the queen-cells in the parent hive, and run them back. The one that came out to-day alighted in a place that it was difficult to get at, so I concluded to let it go, consoling myself with the thought that most of them would die off before spring, after helping to consume part of their winter stores. So I put what they would gather from now until the honey season closes, against what they would eat before they die.

I have often thought of a plan pursued by Mr. Hosmer, of Minnesota, some years ago. He claimed a quart of bees as all he wisht to put away into winter quarters, and would take the combs and shake part of the bees on the ground, claiming that the old bees would shake off and the young bees would stick to the comb. This seems like a barbarous action, but, full as the hives seem now, I believe it would pay.

I have adopted the plan with some of my hives with which I am so well pleased that I think I will follow it generally next year. It is to clip the queen's wings, then when the swarm comes out I set a tumbler over the queen, remove the hive to another place, and set an empty hive in its place, and when the swarm commences to return let the queen run in with them. Or, after the swarm returns, destroy the queen-cells in the parent hive, set it back, empty the bees out in front of the hive, and let them run back.

I would refer the subjects mentioned in this to Dr. Miller for any advice he may choose to give me as a guide to the future. Marshall Co., Iowa, Aug. 11.

From the Egg to the Perfect Bee.

BY H. W. BRICE.

ON examining a cell just after an egg is laid, we find a small white speck standing on end, attacht to the base of the cell, and slightly on one side of the apex thereof; it is fixt in this position by a watery, semi-sticky substance which at this period envelops the whole of the egg. Within a few moments, however, one of the nurse-bees enters the cell—head first, of course—and, after a few seconds of activity, withdraws and hurries away to the next cell to "go on" as before.

Now, let us examine the cell again, and we find that the nurse-bee has carefully placed the new laid egg down on its side, and in its orthodox and proper position at the bottom of the cell. The egg from this time forward is a matter of constant care and attention on the part of the nurses, that are persistently examining it, probably to see how it is "getting on."

On the second day we find the bees have shifted its position to an angle of about 35 degrees; on the third it is again moved to a horizontal position, and on the fourth day it hatches out.

This brings us to the question, What is the still undevelopt insect to be? But in any case, whether worker, drone, or queen, we find the young larva lying in crescent shape at the bottom of the cell, and here it rests for some hours almost unnoticed by the bees, and certainly unfed for 12 hours. Then is seen a little transparent food, upon which the larva almost floats. In 24 to 36 hours the food first exhibits a slight milky opacity, and becomes more abundant until about the third or fourth day, during which time the food is absorbed by the mouth and other portions of the body floating upon it, the larva passing no ejections whatever. At the period mentioned and with either worker or drone larvæ—what is known as the "weaning period" occurs, and for a short time no food is supplied. Then, when nourishment is again necessary, the food is changed, and the rich nutriment previously given—which appears to me to partake of the nature of "royal jelly"—is discontinued, and honey and partly-digested pollen take its place. The worker-larvæ are fed on this until the end of the eighth day, when the cells are capt over, and after the 21st day the insects come forth from the cells perfectly developt, in the form of brownish-gray little creatures, apparently regarded by the adult workers as hardly belonging to the same community. However, in a very short time the newly-arrived ones are running about the combs, clearly to the "manor" born.

Drone-larvæ are fed for one day longer than the workers, the cells being sealed over about the ninth day. They do not, however, issue as perfect insects until after the 24th day from the laying of the eggs, both days inclusive.

Bees have the power to prolong the above times, but I have failed to discover that they can shorten the time occupied in the metamorphosis. They have, however, a marvelous power of lengthening the period, instances having come under my notice where worker-larvæ have been kept at apparently from three to four days old from the egg, until the eighth day, these same cells having been found unsealed on the 12th day. This often happens in queenless colonies.

I have also known drone-larvæ to remain unsealed for days after the generally-accepted period. The protraction of time in sealing the cells is more markt, however, in the case of queen-rearing. A larva intended for a queen is fed during the first three days on the same partly-digested food

as the worker and drone larvæ, with the important difference that the larvæ intended for queens are fed abundantly with this food from first to last, and are not weaned or stinted in any way or at any period, thus the usual time for a queen to develop is 16 days; viz., the egg hatches on the fourth day; larva fed until the eighth day, when an extra abundant supply of food is given, and the cell is sealed by the ninth day—the perfect queen coming forth on the 16th day.

This is generally the case under normal conditions, but it is not unusual to have whole batches of queens not forthcoming until the 18th and 19th day, sometimes issuing nearly all at one time, and sometimes hours after one another, being almost entirely dependent upon when the cells were respectively sealed.

This power of controlling the development of their young, and the many varied circumstances which affect this question is one of the most absorbing phases of our craft, and is another portion of scientific bee-keeping upon which more light is wanted.—British Bee Journal.

Running an Apiary for Extracted Honey.

BY F. A. SNELL.

I FIND it quite essential to run a part of my bees for extracted honey, as I have quite a number of customers about home who wish their honey in this form, and distant customers as well. The lower price at which it is sold compared with that in the comb, is no doubt the main reason. Another reason with buyers living at a distance is, the safety with which it can be shipt, and the lower freight rates charged for transportation. I wish to be in shape to supply all who want to buy, and can only secure this condition by having a supply of both comb and extracted honey on hand.

It is seldom that any surplus storing-room is needed here until the opening of white clover bloom, early in June. The latter part of May or first of June I have all supers in shape to put on the hives, all being clean, or free from dust, webs, or litter of any kind.

At the opening of the honey-flow from white and Alsike clovers, the upper stories for extracting are put on all colonies strong enough to need them. Perhaps in from a few days to a week later other colonies will need room, which is given. Bees increase very rapidly at this time of year, and their strength and progress are noted once each week, and more room given if required by colonies not supplied with upper stories, until all are given supers.

After work has been well begun in the supers, if the honey-yield be good, the first stories on the stronger colonies should be raised up and a super with complete empty combs placed next to the brood-chamber, and the first one placed at the top. The bees will then have time to complete the first and better ripen the honey before extracting than when the honey is taken sooner. The bees are not then crowded, and more and better honey will in a good season be secured by thus tiering all strong colonies.

As a rule I do not extract from the combs given later when taking the first honey. Very little if any new or thin honey will be in the top story when the extracting is done, but will be next to the brood-chamber.

In five or six days after giving the second stories I empty the first ones given, and the same evening, or next morning after, I place these empty supers under those partially filled on the hives, bringing the latter to the top.

I proceed in the same routine until the close of the summer harvest. About one week to ten days later I extract the honey from all upper stories, and at early evening place the empty supers on the hives for the bees to clean up and care for the combs, which are left on the hives until the close of the honey season, unless the fall flow is so great that more room is required, in which case the honey is removed and combs returned to the bees.

At the close of fall bloom, or soon after, the extracting-supers are all taken off, the honey thrown from the combs, and the supers placed at one side of the bee-yard, tiered up, and the little honey remaining in the combs is cleaned up by the bees, and mice excluded; thus the supers remain until the next season.

In taking honey from my bees I have practiced the shaking-off and escape plans of ridding the combs of bees when extracting.

In producing this honey I use a queen-excluder over the brood-chamber, which keeps the queen and all brood out of the supers. When I have a large amount of honey to extract, by the shaking-off plan, three of us work at it. One stands behind the hive with smoker well lighted, with which the bees are kept under control, and out of the way; a frame of honey from one side the hive is taken out, and the bees given a little smoke, when the frame is handed to the second man, who shakes most of the bees off by one or two quick jerks. The few remaining bees are brusht off with a brush made from asparagus tops tied in a bunch, which I like better than those for sale, as I have tried such.

This second man then places the honey in an empty hive-body, which stands on a cart near at hand. The second frame is taken from the hive by man No. 1, and treated the same as the first. No. 2 frees the comb of bees and puts it beside the first frame, and so we proceed until the hive is empty of frames. If the hive is a three story one, the empty body is removed, bees driven down out of the way, and the hive closed.

No. 2 wheels the cart to the honey-room door, lifts off the hive-body and combs, and places it on a bench in the honey-room, raised one inch, by strips, from the top of bench proper.

When extracting from two-story hives, the combs of honey are taken out and the empty body filled with empty combs by No. 1 before closing the hive, No. 2 taking a set of frames empty of honey from the honey-room each time one is brought in full.

Man No. 3 takes out the first frame, uncaps the sealed cells, and places it in the extractor; the second and all other frames in the first hive-body are thus emptied and placed back ready to be returned to the bees.

While uncapping the combs the frames rest on a rack at the top of the uncapping-can, the comb or caps dropping below into a metal basket made of perforated tin. From this the honey drains to the bottom of the can.

From the extractor the honey is run into a pail, and from that poured into a large can covered with a strainer-cloth, which keeps out all specks of comb, bees, flies, etc., if such are present, and the little specks of comb or caps always are. The honey from these cans will run out of the gate at the bottom clear and nice.

Man No. 2 at all times shakes the bees from the combs on an alighting-board just in front of the hive-entrance, and from which they can run into the hive.

The above method is best practiced during a good honey-flow. During a time of scarcity I much prefer the escape plan, of which I will speak later.

Carroll Co., Ill.

Covering the Brood-Frames with Paper During the Season of Cold—Is it an Advantage to the Bees?

BY W. W. M'NEAL.

IF there is one good thing that I enjoy above another it is *light*—beautiful light—be it in the heart or "out-doors."

And I believe I never appreciated it more fully than on Feb. 15, last, when after the clouds had rolled away, the gentle sunlight again reacht my little apiary and me. The air became remarkably dry, however, during that time, so much so that when the mercury was 20 degrees below zero, and sometimes lower, the cold did not penetrate to one's very bones like the damp, chilly air we so often experience here along the Ohio River.

My bees were in single-walled hives, with the poorest of stores it had ever been my misfortune for them to have. As day after day past, and the cold did not abate, I could not conceal from myself the fact that my watch over the bees was becoming no less than a death-watch; I was hoping against hope, and when the sun did shine, it was a sorrowful sight to see the bees dragging themselves out of their cold, comfortless hive, with swollen bodies. Doomed they were, as much from discouragement, seemingly, as the effects of poor food and the cold.

Of all this, two things stood out very prominently, namely, that where such extreme cold is, a properly-constructed cellar should be the place for the bees during that time; and that honey-dew—such as we had here last year—is not a winter food for bees. By a lack of warmth-producing elements, it simply overburdens the bee long before the expected time. Honey, good, ripe honey, is the food for bees; having it, I am not afraid of their suffering from confinement to the hive by the cold.

The only extra protection I have given the bees of late years in these hives was several thicknesses of common newspaper placed directly on the frames, the upper ones

projecting far enough over the sides and ends of the hive so that when the super-cover was on, the large telescope cover would press the paper down over the hive for three or four inches, cutting off to a minimum the upward draft.

The frame I use is self-spacing, of the Root-Hoffman style, tho a little shorter and some deeper than the Langstroth frame. I consider this frame better adapted to the wants of the bees than the loose, swinging Langstroth frame, and, since of late the seasons have been so very uncertain as regards the honey crop, I think it best to yield these little conveniences, some of them at least, to the bees.

Now, do you not see that by closing the space between the top-bars of the frame and the space between the end-bars closed part way down, the space between any two combs is, to a large extent, a little hive all to itself? Can you think of a more convenient way of making the hive always fit the colony? If all this were no advantage to the bees, why did my bees fare better than those of many bee-keepers who winter their bees in the orthodox way—that of having an air-chamber over the cluster?

I will venture to say, many colonies of bees that died last winter did not die of starvation, because there was no honey-(dew) in the hive, but because the temperature within the hive was so cold they could not reach it. Why not, I say, confine the warmth of the cluster to the frames on which the bees are?

You who claim that it matters not if the heat does escape over into the outside spaces between the combs, even to the sides and ends of the hive, for it is still within the hive, and finally returns to the cluster, do you think the bees recognize the fact? Do you think *you* would, if placed in a like situation? I fear not. When the air-space or bee-space over the frames is used in connection with a thick-wall hive, I know of no better death-trap in which to torture bees, especially when the colony is already numerically weak. They cannot generate sufficient heat to ward off the cold, and the winter sunshine never penetrates the icy walls. A thick-wall hive is all right for a large colony, for they of themselves can keep warm within its walls. There they remain quiet—when the food is right—for the light does not attract them.

The single-wall hive is better down here for weak colonies, from the fact that the sun shines frequently—that is, usually—and the hives warm up quickly, tho these frequent flights the bees take cause the queen to lay too early, which also causes her to fall behind at the very time she should be doing her best. Scioto Co., Ohio.

The Advantages of House-Apiaries.

BY A. H. DUFF.

I THINK that bees would be more generally kept in houses if those who keep them would try my plan of management. It is true that quite a number have house-apiaries, and quite a good many of these houses are very peculiarly constructed, and many of them of old date. It seems that in the past considerable prejudice existed against keeping bees in a house, and house-apiaries seemed to be discarded. I think the feeling originated because of structures that were not suited to the purpose intended. I know that some such buildings were very peculiarly and very expensively built, and filled with all manner of ventilators, slides, shelves, and tiers of hives. They were very long, narrow buildings, and certainly disgusted the writer with house-apiaries.

I have used two kinds of houses for bees that I like. One was on a small scale, and the other on a larger one. In the first place, I consider the expense of such things, and adopt something that is as cheap as possible, yet something that will answer the purpose for which it is intended. Perhaps I do not put on quite enough style, but if I cannot make bees bear their expense and give me a profit that will pay me for my attention, I will quit the business, and also stop writing about them.

To get about all the benefit of the house-apiary on a small scale, we construct a house that will accommodate 10 colonies of bees at about the same expense that it would cost to make 10 chaff hives for these colonies. A small house 6 feet wide, 10 feet long, and 7 high, will cleverly accommodate 10 colonies, and give good working-room, besides leaving at the end ample room for an extractor. By using two tiers of hives, which is done in most house-apiaries, it would double the number of colonies. But here I will say, that after trying the plan of two tiers of full colonies in a house, either large or small, I have totally abandoned it.

I do not want full colonies except on the floor, and for the second tier we can conveniently place nuclei for queen-rearing. In these small houses I would only use floor space enough to set the hives on each side, and have a ground floor thru the center to stand on while working with them. In some respects these small houses are preferable to large ones, as they can be made portable and so arranged in an apiary that bees never become bothered in finding their way to the hives, as is the case with those long house-apiaries. They are also very convenient to winter in, as loose chaff may be well packt about the hives, and the house may be half filled with it. As a wintering arrangement they are superior to any chaff hive, and, as I said above, they are just as cheap, if not cheaper. A house of this kind may be made and painted nicely at a cost not to exceed $10, or one dollar for each hive.

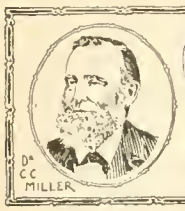
On a large scale I have an ordinary cottage-house of two rooms, accommodating about 40 colonies, using but one tier of colonies on the floor, and on the second tier above I use nuclei for queen-rearing only. This on account of giving more room, I like still better than the small house, and as for shape and convenience, I prefer an ordinary room or rooms, in preference to anything else. I set the hives on an ordinary bottom-board, about four inches from the floor, setting them back from the wall about three inches, thus giving working-space, and room for packing in the winter. Any house of ordinary construction, one that may simply break the wind and turn the rain—a floor is not a necessity—will answer all the purposes of a modern house-apiary. A building of the size of the above, or larger if required, and a number of the small houses as described, would be my ideal apiary.

The advantages of having bees in a house are many. There is not a day in spring, summer and autumn, but you can perform any work with them desired. Hives, supers and fixtures generally, need not be made and painted so as to stand the outside weather, which would add to the cost materially. All of these fixtures will last much longer by keeping them out of the weather, and will remain in proper shape that will allow of their adjustment to the proper place. Bees are much easier workt with in a house, as they seldom attempt to sting. No bees are flying about when you are at work. No robber-bees bother when you open the hives. Feeding is a pleasure. In extracting there are no bees following you around to get a taste. If you happen to get a few bees inside, darken the windows, and by thus throwing the rooms in darkness, and with a few little holes or cracks that will admit the light, the bees will make for them at once, go out, and in less time than I can write this they will all be outside. Of course you want bee-escapes at the windows, which will ordinarily let them out.

During the honey season, which occurs in the hottest time, the opening of hives and the handling of heavy combs of honey are always done at more or less of risk when out in the hot sun, and must often be done at quite a distance from the extractor. In the house, the extractor sets in the center of the room, and it is but a step or two to the hives, as they are all about the same distance away, and only a part of the combs need be removed at a time. In queen-rearing, and introducing queens outside, we often lose valuable queens; the queens fly from the combs which we are handling, and fly away. This does not occur in the house. There is also no melting down of honey-combs in excessively hot weather, as in the case of hives out in the sun. The advantages of fixing them up for the winter, and their chances for wintering better, are equally great.—Agricultural Epitomist. Pawnee Co., Kan.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 587 are well worth working for. Look at them.



QUESTIONS AND ANSWERS.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Getting Straight Section-Combs—Italians and Red Clover.

1. How can I get nice, straight combs, of a uniform size, built in the sections? Some of my sections of honey weigh 1⅓ pounds, while others only weigh ¾ of a pound.

2. A neighbor told me he didn't like the Italian bees, for they were poor honey-gatherers, but good breeders. Is that a fact?

3. Is it a fact that there is a strain of Italians, or any kind of honey-bee, that has a proboscis long enough to gather honey from the large red or mammoth clover?

4. When is the best time to sow Alsike clover seed? I have just seeded ½ an acre, and scattered lots of Alsike seed around my sloughs. Did I do right? MINN.

ANSWERS. 1. Use the small boxes or sections in common use, and have separators between them. There will be a little variation in weight, but no such variation as you mention.

2. I keep bees entirely for gathering honey, and I try to keep them as nearly pure Italians as possible. There are many others like me.

3. As a rule, hive-bees do not store from red clover, but sometimes they are known to do so, either because at times the flower-tubes are shorter than usual, or for some other reason. There have also been reported strains of Italians that workt much more on red clover than the average.

4. Sow Alsike at the same time red clover seed is sown in your region. It was very likely a waste of a good part of the seed to sow in August. If it does not come up till next spring a good share will be lost.

A Case Where Queens and Bees Died.

About the last of July, 1898, there came a little boy into the shop saying the bees were swarming. So I went out and stood and lookt at them a few minutes, and the bees began pouring out of another hive, and another, and so on, till it went as high as seven. They clustered in regular form all together. I tried to get them to go into two hives, but did not make it work. They all wanted to stick to one hive, altho it was more than full. They appeared to work all right, as I watcht them for a day or two. I did not examine them till sometime the first of September, when I saw that they were very heavy. In November, when I put them up for winter, on examination I found the hive as full as it could conveniently be of good white honey, no signs of brood, and not a live bee in the hive, and only about a handful of dead ones. The honey was all capt in good shape, perhaps 15 or 20 cells being filled with pollen. I have handled bees for 40 years, but never saw the like of this before. MINNESOTA.

ANSWER.—The queens were all killed, and the bees stored honey until they died off from old age. No brood being reared, the combs all remained white. That's about the whole story.

Position of Winter Stores in the Hive.

The wintering of bees is an unsettled question for me yet. I lost over 50 percent of my bees in chaff hives last winter.

Where is the place to have the winter stores? Would it be best above, or on one side, or on both sides of the cluster? My bees had plenty of stores last winter. The brood-nest was in the center, the bees moved to one side for food, ate it all up, and then starved, while on the other side were 3 to 4 frames full of sealed honey. I thought to fix the hives, or bees, like this: Winter stores on one side, and bees on the other side, then the bees would go towards the center of the hive, until about January, the coldest time, they would always move towards their stores. PAOLI.

ANSWER.—Left to themselves, you will probably find that bees will always do as yours did, and store the honey at both sides, having the brood-nest in the center. One would think that bees know their own business best, and know just where to store their winter stores for safety. But your experience appears to contradict this, and your experience is that of many others. We must remember, however, that in a state of nature bees don't have their homes in a hive shaped like yours. The old straw skep of our forefathers comes nearer the mark. In that the stores are not on both sides, nor all on one side, but above. That's the best place for winter stores, and if we are building for the bees alone we will have our brood-chambers shorter, narrower, and deeper. But for our own convenience it is much better to have them the shape they are. You have struck the right idea in thinking that it is better to have the honey all at one side, since it cannot be all on top. Then there will be no danger that the bees will be stranded on one side with plenty of stores lying idle on the other side.

Comb Foundation in Section Honey.

Is there any way of producing comb honey without the thick mid-rib with the use of full sheets of foundation? I purchast, last spring, sufficient foundation, supposed to be "extra thin," and filled sections with the same. The results have been perfectly satisfactory with the exception that a number of my customers complain of the amount of wax in the honey, and so I seek information, to know if you, in your experience, have any remedy to suggest. The use of starters suggests itself, but the product is not as perfect nor as pleasing to the eye as the section with the full sheet of foundation.

Many small bee-keepers in this locality complain of the poor yield, and no doubt are justified in their complaints, many having nothing to show in the way of surplus from new swarms. CONNECTICUT.

ANSWER.—I know of nothing better than to use thin or extra thin foundation. Isn't it just possible that some of your customers are a little hasty or prejudiced in their judgment? When extra thin foundation is used in a good flow of honey, it is somewhat doubtful whether any one could tell it from the natural product. Indeed, some of the foundation now made has a base that is thinner than the natural base.

Questions on Brood-Frame Arrangement.

1. Is there any objection to using the Langstroth-Simplicity brood-frames if I make my hives so long as to place the brood-frames just level with the top of the brood-chamber, instead of placing them on top of the rabbets? Will the wide space that will be left on each end of the frames, between the end-bars and the end of the hive, do any harm?

2. How far apart shall I space the brood-frames so as to have just the right bee-space? And will not the half of the spacing that is between the center frames do between the last frame, that is, the frame next to the side of the hive? or should they all be spaced alike?

3. How much honey will a Langstroth-Simplicity brood-frame contain when well filled?

4. Which brood-frames are most proof against propolis? Are the self-spacing all right?

5. Can I use the Simplicity brood-frames without any spacer strip on the bottom-board? I wish to notch down the top-bar ⅜ only, and let the frames hang loose, if this will work all right. MINNESOTA.

ANSWERS. It isn't easy to understand clearly just what all your questions mean, but it may be said in general that very many changes and variations of the Langstroth hive have been made and rejected, and the probability is that unless you have had a long experience any change you may make will do more harm than good. But answering your questions as fully as possible:

1. I don't know of anything you would gain by having the top-bars level with the sides and ends of the hive, and whatever is placed over the hive would have to be specially adapted to the change. If you have more than ¼ or ⅜ of an inch between the end-bars and the end of the hive, the

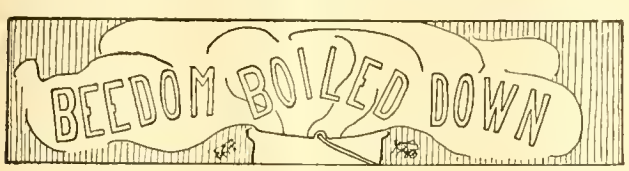
bees will build comb in the space, and that will be in the way of handling the frames.

2. Perhaps the majority space their frames 1⅜ from center to center, altho some prefer 1½. There should be about the same space between the outside top-bar and the side of the hive that there is between the top-bars.

3. Perhaps somewhere from 5 to 7 pounds.

4. It depends upon the kind used whether self-spacing frames are all right. The worst frames as to propolis that I ever used were self-spacing, and those that gave the least trouble were also self-spacing. If the spacing depends upon having a large part of the frames come in contact with each other, then there will be trouble with propolis in a region where propolis is plenty. The least trouble is with frames that have very small points of contact, as when common nails are used for spacers.

5. Yes, probably most loose-hanging frames have no spacing strip. But you can hardly have anything like exact spacing at the bottom if the frames hang entirely free.



Keeping a Caged Queen.—Editor Hutchinson, of the Bee-Keepers' Review, says she may be left for days laid at the entrance of any populous colony during the working season, and the bees cluster over the cage and care for the queen just the same as tho she were inside the hive.

Wood versus Wire.—In the Australian Bee-Bulletin the question is askt whether splints of wood have been tried in place of wiring, and with what results. One man says he has used the wood with much satisfaction, another intends to try it, the remainder have no experience, and one of them thinks it "best for poor bee keepers to keep on well beaten tracks."

Automatically Reversible Honey-Extractors, Editor Hutchinson, of the Bee-Keepers' Review, found used by several Wisconsin bee-keepers, but they ignored the automatic feature, stopping the machine and reversing by hand. The reversing in motion results in a shock which may injure new combs, and it is hard on the muscles of the operator. The Cowan reversible, as now made with a brake, he thinks the most desirable extractor on the market.

For Safe Handling in Shipping, Editor Hutchinson, of the Bee-Keepers' Review, says he saw the following printed in enormous letters and pasted on the tops of crates:

"DO NOT TIP OR TURN OVER.

THIS IS THE TOP OF THE CRATE, NOT THE BOTTOM. IF HANDLED ROUGHLY THERE WILL BE DAMAGES CLAIMED FOR BREAKAGE."

Mr. Hutchinson thinks something like this on crates of honey *might* be heeded by freight-handlers. Possibly, however, it might be heeded as much if a little more in the way of a request, and not so much in the way of a threat.

Source of Honey-Dew.—John Handel, while admitting that it is possible that "plants under certain atmospheric conditions exude a sweet juice from the surface of their leaves," says that under very careful observation he has never seen anything of the kind, and gives the following as a reason why observers, otherwise careful, have been misled: The spray as ejected by the aphides is so fine that a slight breeze will carry it quite a distance. It sticks to anything with which it comes in contact, and absorbs moisture to such an extent that a small particle will spread over a large surface, and still leave a film when it dries. A single drop may start near the top of a tree, and drip from leaf to leaf, while wet, and leave a gloss on each leaf.—Bee-Keepers' Review.

Safe Introduction of Queens.—G. M. Doolittle gives in the American Bee Keeper a plan he has followed many years with very rarely a failure, which, altho it has been given before, will bear repetition: Take a piece of wire-cloth 8 inches long and 5 wide. Cut an inch square out of each corner, and bend up at right angles the sides and ends. That makes an open box 6 inches long, 3 inches wide, and an inch deep. Unravel the wires a little more than half way down. Remove the queen to be superseded, shake the bees from the comb on which she was, place the new queen upon it where there is hatching brood and honey, press the wires of the cage into the comb till the unraveled part strikes the surface, put the comb in the hive, and leave ¾-inch between it and the next comb, so the bees can travel all over the cage. In a day or two—or as soon thereafter as the queen has laid some eggs—quietly lift off the cage, and all will be well.

Temperature for Brood-Rearing.—In Gleanings in Bee-Culture G. M. Doolittle gives an interesting account of experiments made with a thermometer to ascertain the proper temperature for brood-rearing. On a cool night in May, when ice as thick as a window-pane formed on water, he found the lowest point reacht in the brood-nest was 92°. Repeated experiments with strong and weak colonies never showed a lower temperature of the brood-nest, while some of the stronger colonies gave a temperature of 95° on nights in which there was some frost. On the hottest days he found a self-registering thermometer showed 98° as the highest point reacht. So he concludes that whatever favors holding the temperature somewhere from 92° to 98° is favorable to brood-rearing. To this end he likes a chaff-packt hive with a metal roof, all painted dark. The hive is allowed to stand in the sun to get its full benefit till steady warm weather with large population, when a shade-board protects against the hot sun.

Sections Sealed Next the Wood have been considered desirable, and in grading comb honey such sections have taken a higher place. Lately, however, the idea has been advanced that a section is preferable which has no honey in the cells next the wood, not having the dauby appearance of one with honey leaking all around when cut out. A Stray Straw in Gleanings in Bee-Culture says:

"Tastes differ. Mr. Niver and other New Yorkers like to see on a plate a section of honey that is nice and dry, because no cells are filled next the wood. To me it looks far more luscious if the cut cells show, and it is surrounded by some of its own rich gravy."

To which Editor Root replies: "When Mr. Niver presented his view I was inclined to think he was right; and now you have presented your notion, I have flopt again. There is no denying the fact that a chunk of dripping crystal honey has a sort of lusciousness about it that makes one's mouth water. A chunk of comb swimming in its own crystal sweetness reminds one strongly of the good old days gone by, and of how our fathers and grandfathers used to dish out honey in great chunks smeared 'in its own rich gravy.'"

Giving Swarms to Nuclei. The critic of the Bee-Keepers' Review, Hon. R. L. Taylor, refers to page 371 of this journal, where "Doolittle criticises Dr. Miller sharply," commends the response of the latter, but says he failed to reply to one point, "the method of hiving swarms with nuclei." Mr. Doolittle gives as the only safe way, the advice to set the nucleus on the stand of the swarming colony, smoke its bees, and as the swarm begins to return without its queen, which has been removed, shake the nucleus 12 to 18 inches in front, letting them run in with the swarm. Without this precaution the bees of the nucleus would, in nine cases out of ten, kill the bees of the swarm as fast as they came back. Mr. Taylor is surprised at this, having never found it necessary during swarming time to use any such care. Recently he has had considerable experience directly upon this point. For certain purposes he had formed a number of nuclei with virgin queens, and says:

"The hope of surplus having past, and bees in the shape of swarms being superabundant, I have dumpt many in front of these small colonies, without ceremony, and let them run in. In no case was there any quarreling. In all my experience in such cases I have only deemed it necessary that the invading bees should be in considerable numbers and without a queen; and if of a prime swarm, that the queen of the nucleus should be fertile."

Then he hints that "locality" may have something to do with the case. It might be well if Dr. Miller would break silence on this point long enough to tell us whether he has had direct experience upon it, and if so, whether his "locality" is like that of the New York or the Michigan man.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. SEPTEMBER 14, 1899. NO. 37.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

At Chicago in 1900.—The Philadelphia convention of the United States Bee-Keepers' Association closed Thursday, Sept. 7, after a very interesting and profitable meeting. The election of officers, constituting the Executive Committee for 1900, resulted as follows:

President—Ernest R. Root, of Ohio.
Vice-President—G. M. Doolittle, of New York.
Secretary—Dr. A. B. Mason, of Ohio.

It was decided to hold the convention next year in Chicago, where will be held the annual encampment of the Grand Army of the Republic.

Now for a bee-keepers' convention of at least 500 in 1900. The old American Bee Journal extends a hearty invitation to every bee-keeper in the whole country to attend the Chicago convention of the United States Bee-Keepers' Association next year. The exact date will be announced later.

Last Winter's Losses of Bees are attributed by F. Greiner, in the American Bee-Keeper, to bad food. Chaff-packing seemed to make but little difference. Apiaries on the summit of hills suffered more than those in valleys. Locality seemed to have much to do with the loss, one yard being entirely wiped out, and another two miles distant coming thru without loss. As bearing directly on the matter of food, he says:

"Last fall I made mention of the soured honey some colonies had stored in the sections, and I have reason to believe now, had all colonies stored such honey in the supers, we would not have suffered the loss in bees that we did. It would seem that at the time when the flowers yielded this inferior honey, part of the colonies stored it in sections, others in the brood-nest; some of them, perhaps, in outside combs, and others again, exactly above or very near where they took up their abode during the winter. These last ones were undoubtedly the ones that succumbed.

"This theory would also serve to explain the mystery why part of the colonies came out so well when others did not, apparently all having equal chances. Another circumstance seems to favor this view. A number of my colonies which were fed heavily till late in the fall on honey from a preceding year—feeding them for the purpose of having section honey finisht up—came out in fine shape, every one of them! I have also referred to the fact already that the colonies which stored the soured honey in the sections came out all right."

Washington Pure Food Law Rulings.—In the Northwestern Horticulturist of recent date we find the rulings of the Washington State Dairy and Food Commissioner, E. A. McDonald, of Seattle. His ruling on honey—which is of particular interest to bee-keepers—is this:

HONEY.—Must be pure. Cannot be mixt with glucose or other substances and sold as "Honey Compound."

That is sufficiently explicit so that no one need be in the dark as to what kind of honey to put on the market in Washington—simply, it "must be pure."

The Anti-Adulteration Sentiment seems to be growing. It is high time that it should, for the investigation of food products made by Senator Mason's committee some time ago here in Chicago resulted in many startling and alarming revelations. The people are simply being financially defrauded and physically ruined by the villainous adulterations put on the market. Something must be done, and that right soon, to stop the onward course of the hydra-headed monster of food adulteration. We believe that Congress will act promptly and effectually when it once hears the report of Senator Mason's committee.

We were greatly pleased to read in the Saturday Evening Post—that splendid Philadelphia weekly magazine—the following editorial, which has the true ring, and which we of course heartily endorse:

PROTECTING THE NATION'S HEALTH.

If a merchant make large profit out of short weights and measures and adulterated goods, it does not add to his value to the community to have him a generous leader in religious and philanthropic enterprises. He is simply robbing the foundations of principle and character to purchase a temporary public prominence, and his influence is doubly evil because he constantly tempts his competitors to illegitimate expedients, and vitiates reputation by forcing himself forward as an example of dishonest gain purchasing position and respectability. Even when this successful man—successful from the financial standpoint—leaves a million or two to found an institution with his name emblazoned upon it, the usefulness of the enterprise is poor atonement for the viciousness of his business life. It cannot mitigate the effect upon every young man starting out in life who beholds in the benefaction an incentive to conscienceless money-getting.

If this merchant were to eat his adulterations himself, or even if he should feed his family upon them—altho he would hardly be as inhuman as that—we might excuse him on the point of personal liberty, and he and his might go to their indigestion and pepsin tablets and early graves in their own unhappy way. But when he imposes upon innocent customers, and fills their bodies with unhealthy chemicals, and clothes their backs with false pretensions, and takes their money for things that are not as they seem, he is not only a thief, but a public enemy, who poisons the very currents of trade. It goes further than this; if he is allowed by the other merchants to continue his nefarious traffic without a heroic endeavor on their part to stop it and punish him, he becomes, and his methods become, a criterion by which they are judged.

As it is with individuals, so it is with the countries, and the United States is beginning to reap some of the results. Never was adulteration as great in this country as

now. Never was it so ably defended by every resource of cash and counsel. For years it has multiplied in private ways—individual crimes here and there—until it has networkt the country, and, having grown bold on its millions, feels itself strong enough to combine against the morality of business and the good name of the nation. There is no question whatever about the facts. The Congressional committee has collected a mass of them. Reputable journals have exposed them time and again. Chemists possess vast quantities of testimony. Foreign governments have taken cognizance of the matter to the injury of American reputation in every corner of the globe. We blame our friends across the sea for absurd restrictions upon our trade, and yet we allow as fine a lot of swindlers as ever lived outside of prison walls to ply their trade unhampered. From embalmed beef that poisoned the troops to condenst milk that kills the babies, the whole gamut of criminality is run.

It is not enough to say (and the statement is perfectly true) that the great mass of American producers and merchants are honest. The fact which compromises all is the impunity with which the adulterators are allowed to do their work, the liberty with which the sellers of adulterated goods are permitted to cheat the public. It is necessary not only for the safety of our own people, but for the interests of trade itself that the honest man fight the dishonest man, that they free themselves from the charge that they condone the crimes by allowing them, that they use the means best adapted to the end—a stringent national law.

In some of the States there have been measures of one kind or another in this direction, but they have mainly led to much litigation, and the evil has prospered. Now the time has come for Congress to act, and the whole moral sentiment of the country, with the united support of the press and business office, should aid the measure that is more necessary to the public health than a quarantine law, and which is absolutely demanded by our commerce if we expect to hold our own in the markets of the world.

LYNN ROBY MEEKINS.

The Nebraska Bee-Keepers' Association will hold its annual meeting at York, Nebr., Sept. 20 and 21, 1899, in connection with the horticulturists. We notice on the program are the following :

Address, Nebraska Bee-Keepers' Association—Pres. E. Whitcomb.

Practical Bee-Culture—E. Kretchmer, of Iowa.

Sweet Clover for the Farmer—Wm. Stolley, of Nebraska.

Fruit and Bee-Keeping Combined—G. M. Whitford, of Nebraska.

There will also be general discussion of questions of interest to all concerned. Of course everybody is invited to attend. Mr. L. D. Stilson, of York, Nebr., is the secretary of the Nebraska Bee-Keepers' Association, and will be glad to furnish any information.

MR. J. D. GIVENS, of Dallas Co., Tex., writing us Aug. 29, said :

"The honey crop is a total failure here—not one pound have I taken this season."

* * * * *

MR. L. O. THOMPSON, of Addison Co., Vt., wrote us Aug. 28 :

"I have 650 colonies of bees, and not one ounce of surplus honey. This season is the worst ever known in Vermont."

* * * * *

THE RELIABLE INCUBATOR & BROODER CO., of Quincy, Ill., is one of the most successful concerns in all this country. Their 20th Century Catalog is before us—a little over a year in advance of the appearance of the new century. But there's nothing like being prompt, you know. This fine catalog has 160 pages and cover, and contains a wonderful amount of poultry information. It is also well illustrated. Better send for a copy of it, at the same time mentioning that you saw their advertisement in the American Bee Journal.

* * * * *

MR. G. W. LOGAN, of Camden Co., N. J., had the honor of having the Philadelphia Bee-Keepers' Association meet at his home Saturday afternoon, Aug. 12. The principal topic discust was the convention of the United States Bee-Keepers' Association in Philadelphia.

* * * * *

PROF. CHAS. HERTEL, superintendent of schools of St. Clair Co., Ill., had the misfortune to lose a driving horse Aug. 19, it being stung to death by his bees. He wrote as follows to Mr. E. T. Flanagan, of the same county, who forwarded the account to us, saying that it might save some one else from a similar loss :

FRIEND FLANAGAN :—This morning one of my black driving horses ran away while I was trying to get into the buggy. She ran into the bee-yard and upset half a dozen hives and hung with the buggy to a plum-tree. The bees soon literally covered the animal. We finally secured her after she had thrown herself to the ground. She squealed in her agony, and was dangerously frantic after we had rescued her. We could not quiet her until she was exhausted, when we gave her several doses of whiskey. However, she died in agony at 10 o'clock this morning. My son and myself are nearly sick from the effects of numerous stings. CHAS. HERTEL.

In reply to the above, Mr. Flanagan wrote thus to Prof. Hertel :

FRIEND HERTEL :—If you and your help had dasht buckets of cold water *at once* on the bees and horse, and, after getting her loose, had continued to pour cold water over her, in all probability you would have saved her life. Cold water, when readily accessible, is one of the best agents in the world to subdue bees when on the rampage, as in this case. I sympathize with you, Friend H., but don't forget the cold water next time ; and don't give any whiskey. E. T. FLANAGAN.

* * * * *

LADY HENRY SOMERSET is always a prominent figure at the meetings of the International Council of Women, especially when they are held in London. On such occasions her place—the Priory—is thrown open to the American delegates and their friends. It was at a tea in the Priory during the latest London meeting of the Council that Lady Henry told how she came to devote a large part of her life to slum work among the children. Lady Henry, by the way, is almost as well known in this line of effort as she is in Women's clubs and British temperance work.

"It was this way," she said. "I was moved in that direction by the rare patience and imagination of one little boy. His example convinced me that patience was one of the qualities I needed most, and in seeking it I grew into that work. I was in a hospital on visiting day, while the doctors were changing a plaster-cast which held a crippled boy's limb. The operation was exceedingly painful, I was told, yet to my surprise the little sufferer neither stirred nor winced, but made a curious buzzing sound with his mouth. After the doctors left I said to him :

"'How could you possibly stand it ?'

"'That's nothin',' he answered ; 'why, I just made believe that a bee was stingin' me. Bees don't hurt very much, you know. And I kept buzzin' because I was afraid I'd forget about its being a bee if I didn't.'"—Saturday Evening Post.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

Two Things to Remember.—Please don't send to us for sample copies of other papers—we have only the American Bee Journal at this office. Also, whenever sending us a copy of a local paper which contains something you wish us to see, be sure to mark the item in some way. We haven't time to read a whole newspaper thru in order to find a small item occupying perhaps an inch or two of space. We are always glad to receive papers containing anything that you think might interest us, but we want them markt.

Root's Column

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HONEY

Have you any to sell? If so, write us at once giving full particulars and be sure to state the lowest price you will take. If you want any part of the payment in bee-supplies, please state this also. Do not fail to say from what source it is gathered and how it is put up.

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A good many bee-keepers buy of us when their crop is short as they have a local trade they want to hold. We have secured some nice lots, especially extracted, so write us if you want to buy. . . . . .

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Spraying Fruit-Trees While in Bloom

Query 103.—As the spraying of trees and vines while in bloom has caused much destruction of bees and great loss to bee-keepers, should an agitation be inaugurated for its suppression?—FRUITER.

P. H. Elwood—Yes.

Adrian Getaz—Yes.

Mrs. L. Harrison—Yes.

R. C. Aikin—Yes, sir-ree.

Mrs. A. J. Barber—Yes, decidedly.

J. M. Hambaugh—Yes, by legislation.

C. Davenport—Most certainly, in my opinion.

J. A. Green—Yes, we should have laws that will protect the bees.

O. O. Poppleton—Yes, if that is the best way to suppress the practice.

C. H. Dibbern—Yes, because it is not the *right* time to spray, regardless of the bees.

E. France—If my neighbors sprayed during fruit blossom I would talk to them about it.

Chas. Dadant & Son—This has already been done enough to discourage the practice by progressive men.

Prof. A. J. Cook—Most assuredly. Especially as it would be unwise if there were no bees to be injured.

Dr. J. P. H. Brown—Correct knowledge of "the time" to spray should be agitated, and disseminated among fruit-growers.

G. M. Doolittle—York State has so "agitated" and "inaugurated" that we have a strong law against spraying while fruit-trees are in bloom.

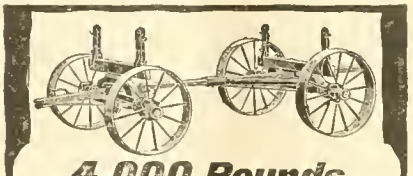
Emerson T. Abbott—Yes, sir! As it is an injury to the fruit as well as the bees, the fruit-grower should be taught this as quickly as possible.

Dr. C. C. Miller—Where have you been that you haven't known that the agitation was inaugurated long ago, and many States have laws for its suppression?

D. W. Heise—Certainly there should be agitation. Every State and territory in America should pass a law prohibiting the spraying of fruit-trees while in bloom.

Eugene Secor—Yes, but the sprayer must be convinced that it does no good to spray while trees are in bloom, for nine times out of ten he doesn't care a fig for your bees.

E. Whitcomb—Get in close touch with your horticulturist, and convince him that in spraying while in bloom he injures his prospect for fruit, and loses his time and material used. Trees cannot be sprayed



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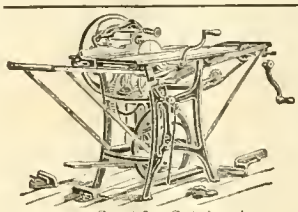

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with water when in bloom without injury. Note how the bloom partially closes to protect the pistil and stigma on approach of a storm. After blossoms have fallen, and before the fruit turns down, is the opportune time for spraying.

J. A. Stone—I think it would be useless, as horticulturists are finding out that it does no good to spray till fruit is out of bloom, and is a great waste of material.

A. F. Brown—Not living in such a location, and not knowing personally the exact extent of such loss to bee-keepers, I cannot say what would be *just* to every one concerned.

R. L. Taylor—There is no advantage to the fruit-grower in spraying trees, etc., in bloom, therefore there should be a law against doing so with any material poisonous to bees.

W. G. Larrabee—As the spraying of trees is very beneficial to the trees and fruit I do not think bee-keepers should try to suppress it, but always advise spraying before and after bloom.

Dr. A. B. Mason—No; the agitation has been "inaugurated," and it ought to attend "strictly to business" till every State has a law prohibiting spraying while trees and vines are in bloom.

G. W. Demaree—Bee-culture is a rural pursuit that is as much entitled to protection by the laws of the State as is any other rural interest. There is no use of

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"agitation." The law makers of the State will generally listen to facts, if intelligent bee keepers will furnish the facts to them. Go at it in a business way.

J. E. Pond—As I do not believe that any good results come from spraying blossoms, I think in the interest of apiculture some means should be taken to prevent the practice of so doing, where it exists.

Rev. M. Mahin—There should certainly be an amount of agitation that will suppress spraying fruit-trees when in bloom. But I think it is pretty well supprest. It is very generally understood that spraying when the tress are in bloom does little if any good.

S. T. Pettit—We have a law, in Ontario, Canada, prohibiting the spraying of fruit-trees while in bloom. It is not a law covering Canada, as one writer has stated. Every State and Province, I think, should have such a law. But it should not require much agitation to secure one.

Mrs. J. M Null—Rather a school of instruction as to when it should be done The ignorance on this question is without parallel. What with the country flooded with oily-tongued spraying-machine agents, all intent on turning a penny, the extent of the evil to be apprehended is incalculable.

E. S. Lovesy—Yes, decidedly. All interested should thoroly understand this matter, and not "go it blind," as many are now doing. Many have drencht their trees, not only destroying the bees but destroying the fruit also, by washing the pollen out of the blossoms, thus throwing their time and money away, as there are no moths or eggs present when the trees are in bloom. While the trees will blossom at a less temperature than 60°, the moth will not hatch at a less temperature than 60, and if they are hatcht artificially they will not lay their eggs at a less temperature than 60 degrees. This can be proven by taking the larvæ and hatching them in the hot-house in early spring. Farther south the difference may not be as long, but here in Utah the trees come into bloom the last week in April, but no hatcht larvæ are ever around before June 10 to 20, and as eggs hatch in a week, and any one can find them less than 48 hours later boring into the fruit, this proves that the eggs are not laid for five or six weeks after the trees were in bloom. Thus June is soon enough to commence spraying, but to obtain success the spraying must be kept up till about the first cold storm in September.

GENERAL ITEMS

A Good Report.

I have an increase of 21 colonies from 32 in the spring, making 53 now, and have taken 1,600 pounds of extracted honey, with about 100 pounds of comb honey. I used mostly queens for my increase, buying 14 and rearing the rest. There is plenty of white clover where I live.

I move my bees every fall to the Illinois bottoms. It is 10 miles. I will move them next week. I think we will have a good honey harvest down there this fall. I use ventilators when I move the bees to keep them cool. I move them on a spring-wagon, 10 colonies to a load. I put a frame over the top of the wagon-bed, and carry 10 without any trouble. I have moved them now for six falls, and never lost a colony.

JAMES GROVER.

Brown Co., Ill., Aug. 2.

Bees with Crooked Combs.

Can we not find some substantial way to handle our bees so that we can get enough honey and money to pay the printer? There is nothing in it this year, surely. Not that the bees got no honey—they would

simply swarm out when they pleased, and are getting worse every year. I suspect that I have been breeding up this strain of bees!

I have made all my increase from colonies that would swarm out by saving all the queen-cells. I am going to stop this way of keeping bees, right now. I want to rear all my queens from some queen that does not want to swarm out—if I can breed it in. I surely can breed it out.

Here is my way of getting rid of a cross colony with crooked combs, or combs that cannot be lifted out of the hive: Set an empty hive on top of the colony, then go to some hive and get frames of brood and put into the empty hive. In 2 or 3 days the queen will be in the top part. Set the top one off on a bottom-board, and carry it off to another stand, then kill her, or clip, as you like. This will answer the question on page 535, concerning cross colonies. Then if you want to, let a young queen run into the old hive after 5 days. C. CRANK.

Osceola Co., Mich., Aug. 28.

No Honey Because of Drouth.

We have had a hard time with the bees this year—no honey on account of the drouth in the spring; however, I think I will come out whole. I had 14 colonies to begin with, and now have 30, and a little over half have some surplus—about 600 sections, and about 24 brood frames, with an increase of 16 colonies. So much for a hard year. I think all will have a living, as they are gathering a little from cotton bloom.

Ellis Co., Tex., Aug. 29. R. H. HARKEY.

Bees Preparing for Winter.

Here in southern Kentucky the honey-flow did not commence until Aug. 10, and to day bees are storing honey nicely, but it is of very poor quality, both in taste and color. If the honey-flow lasts 10 or 15 days longer, good colonies will store enough to winter on, and give some surplus. But the bees seem very much inclined to store honey in the center brood comb as fast as the young bees leave their cells. The field-bees go right about filling the cells with honey and pollen, which seems as if they were preparing for winter.

H. B. LAMBERT.

Simpson Co., Ky., Aug. 26.

Queen Fertilized Seven Weeks Old.

I have never seen it reported in the American Bee Journal that a virgin queen was caged for about seven weeks, and after her liberation was impregnated. Such happened in our apiary this summer. I will tell how it happened.

The first week in June a swarm issued from hive No. 7; it was hived, and out of the parent colony all queen cells were carefully removed. This was repeated until all chances of rearing their own queen were lost, as I did not want any of that stock. Then I put a virgin queen in a cage, and placed her between the frames (this queen emerged from a cell which I had previously taken from some other colony) to be set at liberty in a day or two, but that day or two was past about seven weeks, as it had slipt my mind, that a queen was caged in that hive.

On July 30 I said to my brother, "I must look in that hive, for the colony seems to be getting weaker every day." When the cover was removed I beheld the seven weeks forgotten queen still alive; and before setting her free the hive was again overhauled, and no other queen could be found, neither brood nor eggs. Then I pulled the stopper out of the cage, and she walkt in just as limber and elastic as the best of queens.

Then the question was, Will she be all right yet to leave the hive and meet a drone? The hive was closed, awaiting results.

On Aug. 1, my brother and I went to the hive to investigate. It was about 5 o'clock in the afternoon, and a queen was soon found, and with unmistakable signs that cop-

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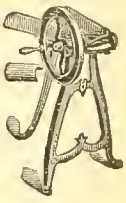

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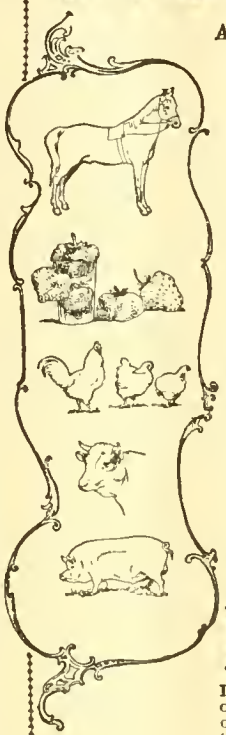

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ulation must have taken place that very afternoon.

On Aug. 4 we lookt again, and found a good many eggs in two of the frames, and to-day the hive is full of brood and many young bees hatching.

The general opinion among bee-keepers is, that if a virgin queen does not meet a drone within 21 days, she is no good. I wonder what those bee-lights think of this case—a virgin queen caged for seven weeks, and still all right.

I never had a case like it, and never read of one in the American Bee Journal in my 17 years of bee-keeping.

BERNARD W. HAYCK.

Adams Co., Ill., Aug. 30.

Why We Blush.

EDITOR YORK:—I have been a subscriber to the American Bee Journal for nearly a year. I will express my appreciation for your efforts to produce such a sprightly paper, deserving of the support of every one interested in bees. The many articles by veterans in apiculture are especially interesting and instructive to amateurs like myself.

Altho I am almost past the prime of life, and too old to learn many new tricks, I wish you all possible success with the green wood, *i. e.*, young generation, to simplify the orthography of the English language. Never mind ridicule—that is the fate of reformers in every branch of human thought and effort.

I want to shake the hand of Mr. Doolittle for the bold and manly stand he takes in his recent article on the price of honey. He is a man who looks below the surface. If the people of his district want to do themselves proud, they should send him where such men are badly needed—to Congress. F. G. SMITH.

Sonoma Co., Calif.

"The Nectar in Flower-Cups."

Regarding that cogitation on page 487, in regard to my position on the different qualities of nectar in the same flower-cup, I wish permission to remark that I wrote so briefly that I did not have space to say that lime and silica are sparingly soluble in water, the latter the more sparingly; that, as the subterranean waters flow along thru the veins and fissures, they contain certain properties, as CO_2 for lime, for example, which make the minerals more soluble, so that they are carried in greater quantities to the surface in *solution*; that the water there parts with these conditions, and loses its solvent power, when most of the particles of mineral change to being merely in *suspension*, and are deposited according to rapidity of flow of the water and rapidity of rate of loss of solvent conditions. But still I have not room to enlarge upon it.

And now I will confess to our good friend Cogitator, that I do not *know* that "two contiguous nectar-glands secrete nectar of exactly the same thinness." But I confidently *believe* that there is no material difference; and I don't believe that Cogitator *knows* that there is any difference. Moreover, if a ribbon-like film of nectar *should* dry down at one end, as he suggests, it would be the *upper* end of it that would dry first, being nearer the air; and, if yesterday's secretion should thicken before to-day's secretions are being poured out, it would show that bees were not overstockt, or the nectar would not have remained ungathered; and, besides, from the establisht tendency of such things toward solution, what would hinder the thin nectar just poured out from dissolving and absorbing the other? or, what would hinder the morning dews from doing so? And why would this nectar dried down in the flower be any better as to *quality* than the same dried down in the hive?

I fancy this is rather a fanciful theory; and that is why I called attention to what seemed to me the weak points in the argument in its favor. It might be well for the next article in defense of it to specify how many and what species of flowers positively have nectaries that allow honey-bees to sip the upper part of the nectar but not the lower portion; and just which of these species do not give their distinctive flavor or aroma to the honey by means of a volatile oil that is more apt to rise to the top than to settle to the bottom. It might be well also to include the mention that boiling honey destroys its flavor, and to say why this is if not because the flavor is lighter and more volatile that the sweetening, and further to enter into the exact dimensions and depths of the drops of nectar in the various flowers. I write with only the kindest of feelings, tho I think that this theory is undoubtedly erroneous in every respect. A. NORTON.

Monterey Co., Calif.

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Season Too Wet and Cold.

The season has been too wet and too cold at night for bees. Flowers have been plenty all summer. Alsike is in bloom and will be until frost; plenty of buckwheat, fire-weed, golden-rod, etc. Bees work hard when the weather is pleasant, but the nectar is too thin. This has been the best day for honey-gathering for some days.

I started last fall with 22 colonies of hybrids, rather dark; I lost one colony in the winter, and one in the spring. I use 10-frame chaff hives. The snow drifted over them, but I left them there all winter. I fed syrup to the bees in the spring and rye ground for pollen. I have increast to 40 colonies. I shall want to Italianize all of my bees as soon as I can. ORLO GLEASON.

Newaygo Co., Mich., Aug. 16.

A Regular Growl.

The fads for the modern bee-keeper are getting too numerous; and if one took up all the so-called improvements he might sell large quantities of honey and still have an empty purse. So many conveniences are about equal to putting two handles on a dipper—it is more work to operate them than they are worth; and changing shapes and sizes of sections so often is perfectly exasperating; then the separator must be toggled over and over, wide and narrow, short and long.

There is no better general-purpose hive than the old-fashioned Langstroth, with its opening side instead of a division-board, the extracting-super holding the same size frames as the brood-chamber, and 2-pound section supers.

The chaff hive may be very fine for wintering bees out-of-doors, but it is altogether too ponderous for a woman to handle. And that gable-roofed cover has a way of hitching at the corners that is a vexation to the soul of at least one woman who is usually in a hurry and don't want to be bothered. Board blankets, too, are a nuisance unless a cloth lining is used with them; for my bees have a way of sticking them down so tight that a knife or some prying tool must be used to lift the cover, which usually comes up with a jerk, and then there is high tragedy for the next scene.

Much as the plain sections and filled-out combs are lauded, the sections that are large enough to allow for the propolis would please the average housewife best. It is just as well if "the gravy" does not make a vast spread till it is needed. "The gravy!" what a name for a conserve; but that's man-fashion. MAY MAPLE.

Manistee Co., Mich.

Utah.—The Utah Bee-Keepers' Association will hold their semi-annual convention in the City and County Building, Salt Lake City, Oct. 5, at 10 o'clock a.m. A full program in the interest of the industry will be presented. All are invited. Some prominent bee-keepers are expected to be present, and one or more meetings may be held at the State Fair.

J. B. FAGG, Secretary.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec.

New Milford, Ill.

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BLOCKLY, Iowa, July 5, 1899.

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Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia. A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

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York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00 For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Sept. 7.—Fancy white comb honey, 15c; No. 1, 13@14c; light amber, 11@12c; dark and amber, 9@10c. Extracted, white, 7@8c; amber, 6½@7c; dark, 6@6½c. Beeswax, 25@26c.

Consignments of small lots of comb honey are becoming more frequent, and while there are some who will not buy at the prevailing price, yet a fair trade is being done; this also applies to extracted honey and beeswax.

R. A. BURNETT & Co.

KANSAS CITY, Aug. 10.—The receipts of honey are light, demand fair. We quote: Fancy white comb, 15c; No. 1, 14c; No. 1 amber, 12@13c. Extracted, white, 6@6½c; amber, 5½@6c; dark, 5@5½c. Beeswax, 22@25c.

C. C. CLEMONS & Co.

NEW YORK, Aug. 22.—Demand good for new crop comb honey, excepting buckwheat. We quote as follows:

Fancy white, 14@15c; No. 1 white, 12@13c; fancy amber, 11c; No. 1 amber, 10c. Extracted firm at unchanged prices. Beeswax dull at 25@26c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾. light amber, 6½@7c. Beeswax, 26@27c.

Market is firm at unchanged quotations, with demand fair and offerings light. The last Panama steamer took 312 cases extracted for New York. The ship Centesima sailed with 349 cases for Liverpool; another took 4,000 lbs. beeswax.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber. 10@11c.

A. B. WILLIAMS & Co.

BOSTON, Sept. 8.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 12@13½c; No. 2, 11c. Light amber extracted, 8@8½c; amber, none to quote. Beeswax, 27c.

Practically no new comb honey has been received as yet, and stocks are steadily being reduced, so that there is really no honey on hand, with quite a little inquiries. We strongly advise shipments of comb honey to be made as early as possible. BLAKE, SCOTT & LEE.

BUFFALO, Sept. 8.—Receipts continue very light of strictly fancy 1-pound comb, which sells very well at 12@13c, occasionally 14c; dark from 8@10; low grades less. Few small lots can be placed fairly well right along now.

BATTERSON & Co.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.

PEYCKE BROS.

DETROIT, Aug. 19.—There has been no offerings of new honey and old is fairly well cleaned up. Fancy white we think would bring 14 cents, other grades proportionately cheaper. White extracted, 7@8c; no dark to quote. Beeswax in good supply at 23@24c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,

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which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co.....Sheboygan, Wis.
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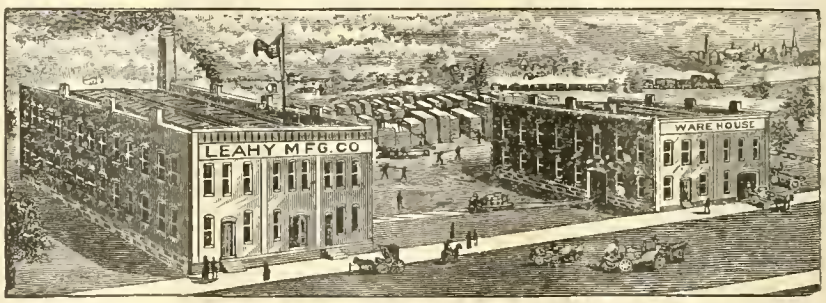

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., SEPTEMBER 21, 1899. No. 38.

CONTRIBUTED ARTICLES

Mr. F. L. Murray and His Apiary.

I began bee-keeping in the spring of 1892, with four colonies in 8-frame Langstroth portico hives. I was working for the Chicago, Milwaukee & St. Paul Railway Company as a telegraph operator and station agent the fall of 1891. A Mr. Reed (from whom I bought the bees) got me interested in the subject, and I agreed to buy four colonies from him in the spring, and work up. So in the spring of 1892 I quit the railroad and went home to learn the art and mysteries of bee-keeping.

I increast the four colonies to 12, and had 200 pounds of nice honey in pound sections for my experience that season. I have been working with the bees more or less ever since.

In the spring of 1892 I also began raising fancy poultry, and find it works very nicely with bee-keeping, for I do not agree with Mr. W. Z. Hutchinson, who says, "Carry all the eggs in one basket, and carry them so carefully they will not break." I would prefer to have mine in more than one, so if one basket gets tipt over I will still have some left, for the best of us is likely to get tript up some time.

I have now 160 colonies in two yards. My sister (Mrs. White) and son Lynn, aged 13, are also greatly interested in bee-keeping, and give me what help is needed, for, like "Rambler," I am living in single blessedness.

The illustration herewith shows part of my home yard, which is run for comb honey; the out-yard is run for extracted honey. I use the 8-frame dovetailed hive in both yards. In the out-yard I use three hive-bodies, with a queen-excluder between the second and third bodies, and do all my extracting from the third story. With this method I do not have any swarming to speak of, and do not visit the out-yard except to extract, or do any other necessary work with bees.

The home yard is wintered in a cellar, built expressly for the bees in the yard, which winters them as nearly perfection as they can be wintered in a cellar. The out-yard is wintered in clamps 16 feet long, each holding 10 colonies packt in chaff, which is my favorite way of wintering and springing bees. The covering is not taken off until settled warm weather has come, and they get the spring protection needed this far north that the ones in the cellar do not get, and those colonies wintered out-of-doors packt in chaff are always in better condition than those wintered in the cellar with no spring protection after putting them out.

Of course, there are two serious drawbacks to wintering out-of-doors, and they are the labor involved in packing them, and the extra brood consumed to keep up sufficient heat.

I lost quite a number of colonies in the out-yard last spring by unavoidable neglect. About the time in spring when we had our first warm days, and the entrances should have been cleaned out, and colonies lookt after, my father died, and it was impossible to get away to attend to them, so what I lost smothered by not having proper ventilation. I have always had my share of the honey crop in this section of the State (when there was any honey to get). The crop thruout the State, as nearly as I can learn, is a light one this season.

As a rule, when a person gets the bee-fever how enthusiastic he gets over it, if he has a love for Nature, for in becoming a practical bee-keeper, and studying the busy insects he is interested in, and the flora of the country, it puts a person more in touch with Nature and the mysteries that surround us in our daily work than any other pursuit I know of; for bee-keeping is noble, and is a higher inspiration than any other branch of agriculture.

With our present methods of handling bees, and our facilities for shipping the honey crop (when we get one), it is a round of pleasure from taking the bees out in the spring to putting them away in the fall. I always feel grateful to the veteran bee-keepers for the services rendered the present generation, for there is no other industry

Mr. F. L. Murray's Home Apiary—Showing Wintering-Cave, Bee-Tent, Swarm-Catcher, etc.

that is represented by as intelligent a class of men and women who are so liberal with their practical ideas and experiments, for, as a rule, there is no improved implement or method of conducting an apiary but is given to the bee-keeping world as freely as water—it is not hidden under a "half bushel" to make money out of, as most other pursuits are conducted. Long live the big-hearted, whole-souled bee-keepers; they are a class of people we should all be proud to belong to. F. L. MURRAY.

La Fayette Co., Wis.

Crooked Section-Combs—Difference in Colonies.

BY G. M. DOOLITTLE.

QUES.—I am trying to produce section honey without using separators, and have some bulged or crooked combs. Some time ago I read the following in a paper: "In the fall, after extracting the honey from the partly-filled sections, and recasing the sections of empty comb, no separators being used, the combs are not always perfect in the sections. When we find one side a little fuller than the other, we put the two full sides together, and the hollowing sides together. No matter if the full sides of the combs should touch each other, when the bees begin operations the following season they will cut right thru, building out the other sides equally, and the occasional crooked ones are thus made straight." Is this right? I have it copied into my diary.

ANS.—The very admission of both yourself and the writer quoted, should convince you that the only way to produce section honey, in the most marketable shape, is to *use separators*. When a person admits that occasionally he has crooked combs by the non-use of separators, I always read between the lines that those occasional crooked combs can be multiplied by *ten* and not be far out of the way. And then those occasional crooked combs condemn the use of any system which gives an occasional faulty thing, when there is a system equally good in every way that does not give a single faulty section along the line of crooked combs. But, to the question:

I wonder if the writer had ever practiced the plan given, and, if so, how it could be that his experience was so much different than mine had been when trying the same plan. In every case where I ever put two combs in sections, or brood-combs even, so that they toucht each other, I have found that the bees always left little bridges of comb from one comb to another, so that, when the combs were pulled apart, the cappings of one or both combs were broken, thus setting the honey to running and making the sections in anything but the *best* marketable shape, unless put back on the hives for the bees to recap the cells. And this is not satisfactory, for in so doing the bees nearly always remove the honey out of these damaged cells, so that the whole process requires nearly half as long as it does to fill a section from the start. This causes a great waste of time to the colony, for they are thus kept fussing over a bad job instead of doing new work.

My plan has been to place any crooked combs I may chance to have—brood-combs or otherwise—at the top of a warm room, on a piece of canvas, until thoroly warmed thru, when the combs can be bent and straightened to the perfect satisfaction of the operator. In this way I have a perfect thing of it; and as the work is performed in the winter it is much more cheaply done than in having the bees make a "botch job" of it in the summer.

DIFFERENCE IN COLONIES AS TO SURPLUS.

QUES.—I have noticed for some years back, that, of many colonies in the spring, which were exactly alike, as nearly as I could discover, some colonies would give an excellent surplus, while others would give very little or none at all. Why is this? Can you tell us in the American Bee Journal?

ANS.—Here is a question that used to bother me greatly, for I was formerly troubled in the same way; but of late years I have succeeded in making the most of my colonies which were workt for honey, produce nearly like results; that is, if one colony contains 40,000 bees and produces 100 pounds of honey, I obtain about that amount from every colony containing a like number of bees; while one having 20,000 bees gives a yield of about 45 pounds, for a small colony will not give quite as large a yield in proportion to its numbers as a large one. After carefully studying on the matter I found that colonies I pronounced "exactly alike" on May 15 would not be so at the time the honey harvest was at its best. The trouble was I did not have a thoro knowledge regarding the working force of my bees at all times, nor of the interior of the hive.

For instance, the colony which I called the best on May 15 might become the poorest by July 10, at which time the honey harvest arrived. This might be owing to two causes, one of which would be the failing of their queen, and the other that the colony would reach its maximum of strength some time previous to the harvest—either of which is sure to lessen the yield.

I have often noticed that a colony which winters extremely well, and goes to breeding rapidly in early spring, is generally sure to produce less honey than the colony that begins to breed rapidly from 40 to 50 days previous to the honey harvest. The reason seems to be, that the queen in such a colony breeds rapidly very early, ceases her prolificness to a very great extent by June 5 to 10, this allowing the bees to put the first honey coming in into the brood-combs, rather than forcing it into the sections, as does the queen which arrives at her maximum egg-laying at this time. If this is not the case, the colony becomes demoralized by becoming too strong at this time, and so goes to loafing around, or, what is worse still, contracts the swarming-mania—either of which is against a large yield of section honey. If the bees become over-anxious to swarm, or the queen ceases to be prolific, so that the bees get the start of her and store honey to any great extent in the brood-chamber during the first of the honey harvest, that colony will not do nearly as well as will one which does nothing of the kind.

The remedy is to keep the queen on only a few combs early in the season, or take away a part of her brood to strengthen weaker colonies till the right time has come, when her extra powers will rear bees that will come at just the right time; then coax her to do her level best, and you will succeed. At this time give all the combs the hive will contain, and let her spread herself to her greatest capacity, then the colony will reach its strongest point just when the harvest is on, and thus bend every energy at storing in the sections rather than crowding the queen, or loafing around.

Onondaga Co., N. Y.

A Skillful Canadian Bee-Keeper's System Reviewed.

BEE-KEEPING, as an industry, or even as an adjunct to farming or other occupation, is not as general in a country so favorable to it as ours as its advantages would seem to warrant. True, it is an occupation for persons of leisure, but on a farm where the family comprises several members, a few colonies would be found to give very little trouble, and furnish an article of food which would be not only a relish but a healthful daily adjunct of diet.

Going further, we may state from experience that after the habits of the bees are commenced to be understood, and therefore the methods of manipulating them mastered, they become a source of real interest and pleasure, and if gone into on an extended and thoro scale, a means of considerable revenue. If one has the qualifications of being cautious, observing, and prompt, bee-keeping can be engaged in without fear of failure, and to persons who swell up and become seriously affected with the stings, it may be some comfort to know that after a few stings the system becomes inoculated against the effects of the poison, when a prod from an angry bee becomes of little more account than a mere mosquito-bite.

The management of an apiary is not a difficult matter, and needs very little outlay to commence with. One handy with tools can make the hives and nearly all their attachments. True, no matter how full instructions are received, or how many bee-books are read, many points will have to be pickt up by experience and observation, so that to succeed in getting the most from the colonies, observation, perception and invention play an important part. These and many other necessary qualifications have assisted the very successful apiarist and proprietor of "Evergreen Farm" and bee-yard, Mr. S. T. Pettit, of Elgin County, who now, at the end of 25 years of studious experience, is lookt upon by the more advanced bee-keepers of Canada and the United States as one of the first authorities of apiculture.

On July 20 we spent most of the day with Mr. Pettit, who, with his son, was busy taking off the last of this season's extracting. This will be finisht in a few days, when

the fine harvest of fat-comb sections will be removed. By observation and conversation we gathered many important features of Mr. Pettit's system, which we will endeavor to give to our readers.

COMB HONEY THE SPECIALTY.

Mr. Pettit, like many advanced bee-keepers, makes a specialty of comb-honey production. The proportion taken is largely governed by the extent of the swarming, as new swarms are better suited to comb-honey production than those that have come out from winter quarters. This year (1898) swarming has been under the average, and, as a result, Mr. Pettit has only about one-third of his hives supplied with comb-section supers. The spring is usually commenced with 75 to 80 colonies, which come out in vigorous condition from the cellar.

The hives used are of Mr. Pettit's own invention, having brood-frames 9 inches deep and 14¾ inches long, and extracting-combs 14 inches deep, and of the same length as the brood-frames. The hives are built to hold 12 frames. When the bees are first brought out in spring they are confined to the brood-chamber until maple blossom commences. Shallow supers are then put on, and the brood is spread in the brood-chamber by placing the center frames, which contain most brood, on the outside and exchanging for them the outside frames, which contain more or less honey. This is uncapt, so that the bees can readily remove it to the super, leaving room for the queen to lay in these combs when emptied. This exchanged position of frames is only safe when the bees are sufficiently numerous and strong to keep the outside frames of brood warm. When clover honey-flow commences, the strongest colonies are given comb-supers in place of the shallow supers first put on, but the others are given extracting-supers 14 inches deep. Usually two comb-honey supers, each holding 36 sections, are put on, but when the strength of the colonies and copiousness of honey-flow will warrant it, three supers, or 108 sections, are put on. Sometimes the third super is added after the others have become filled, or nearly so. At the time of our visit nearly half of the comb-honey-producing colonies had three supers, which in most cases contained about 14 ounces of beautiful, well-capt honey per section.

EXTRACTING HONEY.

Mr. Pettit has his own method of taking off extracted honey. As soon as the frames become filled the first time in the season, the six fullest frames are selected out of each hive, and the remaining six are shoved to one side, and empty frames placed in the empty half of the super. The date and side removed are written on the back of the hive, and as soon as full and capt the other side is extracted. By this means the bees are not delayed for a moment, and the work of extracting is facilitated. This is the means adopted till the last extraction (which was in operation at the time of our visit), when all the combs are exchanged for empties. It is remarkable the amount of honey these bees are made to produce, viz.: from 150 to 160 pounds per colony of extracted honey.

Mr. Pettit has an ingenious and simple method of removing the full combs. When it is desired to remove six frames, as is the custom early in the season, the hive-cloth is stript off just the width of the six frames, a few puffs of smoke sends the bees down, when the frames are quickly lifted out and the empty ones placed in before the bees have commenced to return. The cloth and cushion are replaced with very little disturbance to the bees. As the full combs are lifted out they are each given a shake before the hive, and then stood up at the back of the hive till the cover is put on and they are ready to be taken to the extracting-room. The few remaining bees, which by this time feel lost and lonesome, are swept off with a feather, and all is over in a very little more than a minute, with no commotion, no stinging, and no chance for robbing. The extracting is done by a large extractor, which handles four frames at once.

The empty frames last put on continue to receive a little honey thruout the remainder of the season till brood-rearing has ceast, about the middle of September, when the supers are all removed. This is done thruout the whole yard as nearly as possible at the same time. Each super is left uncovered and placed on the ground a few feet in front of the hive from which it was taken, and which is now covered with cloth-cushion and hive-cover. This sets the entire working population in active service, carrying the honey into the brood-chambers for winter stores.

True, a big commotion is set up, but practically each swarm is attending to its own case, and no evil resnlts from robbing or any other cause. About the end of September the hives are examined to see what stores are needed, and feeding is proceeded with as it is deemed necessary. The food given consists of four-fifths granulated sugar and one-fifth honey. It is calculated to allow each colony 30 pounds of stores for the winter months.

SOME NICE POINTS IN MR. PETTIT'S SYSTEM.

Bee-keepers know generally how difficult it is to have the outside, either comb or extracting, frames as well filled as those in the center of the super. Mr. Pettit has quite overcome this difficulty by allowing the entrance to extend clear across the hive, and by raising the front an inch and a quarter above the bottom or floor, by a wedge on either side of the entrance. This allow the bees to enter the hive the full width, and compels them to walk up the sides or back of the hive, so that they always fill the outside frames first instead of last, as is the case with the narrow entrance.

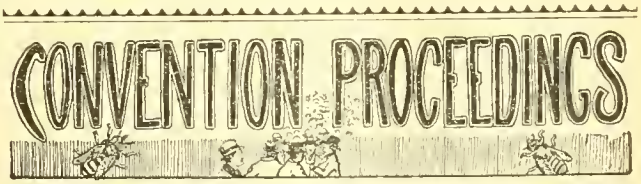
Another means to this end with comb sections is to create a bee-space between the outside comb sections and the walls by inserting a perforated divider held out from the wall by tiny blocks of wood a bee-space wide. This allows the bees to pass up and down freely, which they do the same as between the sections, and holds more bees at the outside of the sections.

Another advantage afforded by the wide and deep entrance is the ventilation and comfort afforded the bees, especially in hot weather. Undue swarming is thus prevented. The extracted-honey hives are ventilated at the top and at the back, but no top ventilation is given the comb-honey hives, except for a few days after a new swarm is hived, when it is necessary to afford them comfort in order to commence their working at an early date. This is usually permanently closed up on a cool evening when all have settled down.

Another practice with a newly-hived swarm is to substitute two frames on either side of the brood-chamber for dummies, so as to contract the brood-chamber and get the bees working in the sections above. Late in the season six dummies, or three on either side, are inserted, but it requires the judgment of an experienced bee-master to manipulate these nice points.

Regarding the capture of swarms, Mr. Pettit always keeps his queens clipt, so that they are not able to take flight with the swarm, but commonly fall on the ground in front of the hive. She is pickt up and placed in a cage, which is placed in the entrance of a new hive, which takes the place of the old one, which is moved about two feet back and left there about six days. As soon as the issuing swarm find their queen is not with them, they return to the old stand, but new hive, find their queen, and at once proceed to occupy the hive.

Some of these ingenious methods may be used in general practice, but not a few of the most valued of them originated with Mr. Pettit, who delights in giving to the bee-keeping world the benefits of his experience and invention.—Farmer's Advocate.



Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

The 30th annual meeting of the United States Bee-Keepers' Association was called to order at 7:30 o'clock, Tuesday evening, Sept. 5, by the President, E. Whitcomb, of Nebraska.

Mr. Haenle, of Philadelphia, sang a solo, and prayer was offered by Rev. E. T. Abbott, of Missouri, after which Mr. John L. Kugler read the following paper:

The Fall Honey Crop of Philadelphia.

The subject assigned to me by your secretary, is the fall honey crop of Philadelphia. I sought to have this changed to the fall honey crop of southern Philadelphia, as the flow which they wish me to tell you about is confined to points

below the thickly built portion of the city, and along the banks of the Delaware River. It extends on both sides of the same in the States of Pennsylvania, New Jersey and Delaware, until the Bay is reacht, and, possibly, further south. The northern part of Philadelphia has none of this flow. They denied me this change of title, but as I know more about the honey crop of southern Philadelphia, I will confine most of my remarks to that portion.

Our fall honey is very fine in flavor, bright amber in hue, quite dense, and finds ready sale. It is nearly all extracted, only a little comb honey—very little indeed—being produced, and the bee-keeper soon abandons the use of sections. This honey comes from the meadows and reclaimed ground along the Delaware River.

As to what flowers the larger part of our crop comes from, we do not agree. We think it is mostly from the heart's-ease (commonly called smart-weed), fall asters, golden-rod, wild cosmos or life-root, queen of meadows, iron-weed, etc.

We find that our largest crops come when we have a dry fall preceded by a considerable amount of rain in the spring and summer months.

We then have clear days for the bees, and the rising tides keep the plants in perfect bloom. The rain in the spring and summer helps the growth of the plants on the high ground, and when these conditions are combined, our crops are measured by the quantities of comb we have on hand, to give them for the storing of the honey.

When I first joined the Philadelphia Bee-Keepers' Association, and told them about our fall flow, I was treated very kindly by them, yet distinctly given to understand that they thought I had been drawing very largely upon my imagination. This was the universal opinion of its members, so that it took me two years to get them to hold one of their bee-meetings at my apiary, and then only a few members attended. It was only last June that we succeeded in getting our president, Dr. Townsend, at a meeting in our neighborhood, but I will say that after coming, and seeing for themselves, they have made ample amends for their want of faith in my statements about our fall flow, and hence this paper.

We are compelled, like other bee-keepers, to prepare in advance for our crops, as Mr. Hutchinson says, "The successful bee-keeper gets his colonies in shape the preceding year," only we are not troubled with swarming and its attendant evils.

Our spring flow is very small, sometimes not enough to keep the colonies during hot weather, and when we have a spring crop it is so dark as to be almost valueless, being composed largely of honey from the poplar.

I have kept bees for 14 years, and in that time I have known only one season when we were troubled with swarming. As a rule—and a fairly safe one with us—a colony in a two-story Simplicity hive will not swarm. I do not wish you to get a false impression from this statement, and think that it is due to small colonies, as we find that such do not pay; but it is rather due to a lack of surplus in May and June.

Our fall crop commences about the middle of August, and extends up to heavy frost, altho the surplus is all in by the last of September. Yet I have known the bees to bring in honey as late as November, but in small quantities, probably from plants protected from frost by the river.

During the fall flow we are unable to get the bees to build comb in supers or frames above the brood-chamber, on account of the cool nights; this is the reason we all run for extracted honey. We generally try to keep the bees building comb in May and June, storing the frames that are not in use in the second, third and even fourth stories. This keeps them free from moth, and allows them air-space during the intense heat of summer. When I find a crop of poplar honey comes in our apiary, I endeavor to get the bees to convert this into new combs. In my neighborhood, in a circuit of two miles, we can count about 350 colonies, but I do not think that half of them produce fall surplus, simply from the want of proper management.

Along the banks of our river are vast meadows, mostly reclaimed on the Pennsylvania side with dykes, etc., and it is here our bees find pasture, and I think there is many a river in the States where like pasturage may be found that is now visited by very few bees.

I have secured a few samples of flowers from our meadows, some of which we do not know the names, and I think a few are of foreign origin. Every year a large number of vessels arrive in the port of Philadelphia from all parts of the world. Quite a number of the flower-seeds come in ballast, some of which is dumpt in the river on the way up, and we think the seeds are brought to our shores in this manner.

I increase my colonies mainly, or, I might say entirely, by dividing them—that is, by taking three or four frames of brood and giving them either a queen-cell or a young queen, so they can bring in honey to winter on. I find it advantageous to keep two points in view—strong colonies and plenty of combs, providing they are free from moth; and when these things have been accomplisht, I am almost sure of a crop.

One of my neighbors, a Mr. Ludwig, has an apiary of over 100 colonies, and last year he produced 350 gallons of extracted honey.

I am informed that our brother bee-keepers in points north of Philadelphia are feeding their colonies, when we are having one of our large yields, and this before the asters on high grounds are in bloom. J. L. KUGLER.

On motion of W. A. Selser (Pa.) it was voted that no person be allowed to speak more than five minutes on any subject under discussion.

W. A. Selser—We are all favored in one thing, that is, the tide that feeds the rootlets and never fails because the tide never fails, so that those who live south of Philadelphia never fail to get a good flow of honey.

A. L. Boyden (Ohio)—Very often we get samples of flowers. I presume our friends can do the same.

Some samples of honey-producing flowers were exhibited by Prof. Keebler, among which were—

Eupatorium purpureum (reddish in color)—Joe-Pye or trumpet-weed, gravel-root, fall or purple boneset, kidney-root, queen of the meadow.

Eupatorium perfoliatum—boneset, common thorowort, Indian sage.

Collinsonia Canadensis—horse-balm, rich-weed, stone-root.

Bidens trichosperma—gall fickseed, sunflower.

Vernonia noveboracensis—New York iron-weed, flat-tops.

Sonchus oleraceus—annual sow-thistle, hare's-lettuce, hare-thistle, milkweed, milky gassel, swiney.

Prof. Keebler said of course they all belong practically to the composite family.

Rev. E. T. Abbott—I am an amateur botanist. We have a wild flower in the West, but I have never been able to name it.

Prof. Keebler—Some express doubts about the name of this flower, but if I come here to-morrow I will look up the name for you.

After a song came the following paper by Mr. Fred L. Craycraft, of Cuba, entitled,

Possibilities and Difficulties of Bee-Keeping in Cuba and Porto Rico, and the Effect of Our New Relations With these Islands on Our Honey Markets.

The recent struggle of the Cubans to throw off the Spanish yoke, and which finally culminated thru the intervention of the United States, is still fresh in the memories of all, and on account of the close commercial relations which exist between these countries, and the possible annexation of this island, thus adding another star to our national ensign, has caused people to observe with interest signs of renewing commercial, agricultural and industrial activity, which will in time cause a profound impression on the American people, benefiting many by opening up new markets for American products, while at the same time others will seriously feel the competition caused by the introduction of products from these countries into our own markets.

This question is one of particular interest to the American honey-producer, since heretofore the production of honey in this country has been largely in excess of home consumption, and we know that exportations of honey and wax from the island have been very large, altho the almost absolute lack of reliable statistics upon which to base any calculations as to the future exportations of this article make it a very difficult matter to form any approximate estimate of the importance it will bear on our honey markets in the future.

The honey and wax production of Cuba before the war, which commenced in 1895, was very important in all districts of the island, especially in the provinces of Puerto Principe and Santiago de Cuba. According to the statistics of exportation of Cuba, publisht by the minister if insular affairs of Spain: during 1894 2,433,969 milograms

(5,354,000 pounds) were exported from Cuba. Of this amount 4,300,000 pounds were shipt to the United States, but almost all was shipt in transit to European markets, only a very small percentage entering the American markets.

According to the same authority only 1,404,845 kilograms (3,090,000 pounds) were exported in 1895. This large falling off in exports is easily explained by the fact that in February of 1895 the revolution commenced in the eastern provinces, and the writer's own practical experience with an apiary of 300 colonies demonstrated that the honey-yield was considerably under the average—caused by the cool northeast winds which prevailed during the height of the campanilla bloom.

With a very few exceptions this must be considered a natural and spontaneous production, as the bees receive very little care, the only physical exercise required being to put the swarms into empty boxes, and place a palmetto leaf on top weighted down with a stone. The mental exertion required in studying up better methods for their management was considered entirely superfluous.

The native creole or box-hive consists of a box about 4 feet long and from 8 to 12 inches square inside, and open at one end. Where lumber is scarce, hollow logs are sawed off and used in the same way. The hives are placed in an almost horizontal position, only being inclined enough to keep the water from running in at the entrance or open end.

The old adage, "There's nothing new under the sun," is strikingly proven in this case, for here it is that reversing is carried to perfection. When a swarm is placed in one of these long boxes, the bees take up their abode in the spot most suited to their fancy, generally near the middle, leaving a vacant space at each end. As the honey-flow commences the bees naturally build comb and store the honey in the closed end where it is better protected from outsiders. The first extracting takes place during the latter part of December, when the board is knockt off the rear end, and the honey cut and pulled out with long hooks. After this operation, the hives can be turned around and the other end closed up, the extraction of the other end taking place during the latter part of January. Two, and sometimes three, extractions are made during the season, besides a "limpieza," or cleaning up, given the bees in August or September, when some honey and considerable wax is taken from them, thus reducing the opportunity for the moth-worm to get a hold on them.

It can be seen that altho the honey-flow is very bountiful, only a limited amount of honey is obtained on account of the bees not having any place to store it.

Taking into consideration the waste consequent upon such a crude system in manipulation, I think an average of three gallons of honey per hive to be a conservative estimate, and if we can place any reliance on the statistics of honey exported during the economical year of 1894, it will be seen that it took nearly 160,000 colonies to produce this amount.

It is difficult to form anything but conjectures regarding the importance and value of apiculture in Cuba, as the wave of fire and death which swept across this beautiful island has almost totally exterminated not only the bees, but also their owners. The following instances are given as examples: From the mayor of the town of Jaruco, 25 miles east of Havana: "I calculate that 98 percent of the bees in this district have been destroyed since the beginning of the war. There are now only four apiaries consisting of 250 colonies. Colonies in creole or box-hives yield about four gallons each, and those in American hives, 16 gallons each." It will be remembered that this is the place where the Casanova apiary was located, and which was so ably managed by our late friend, Mr. Osburn, and from which Mr. Somerford got the banner honey crop of Cuba. Thanks to the purifying effects of fire, the foul brood which wrought such havoc in that apiary has been eradicated.

From the town of Candelaria, in the province of Pinar del Rio: "Before the war there were five apiaries of over 700 colonies each in this district, besides many others of less number. There are now only a few scattering colonies which were saved within the town."

From Amarillas, a town on the south coast of Matanzas Province: "Before the war there were 10,000 colonies in this district; now only 90."

From the foregoing it can be seen that at least 90 percent of all the bees on the island have disappeared.

Since the first of January, 1899, to July 1, over 600,000 pounds of honey have been exported from Havana; of this amount over 500,000 pounds have been shipt direct to France by the firm of Bridat, Mont Ros & Co., who, on account of their dealings and liberal prices, have succeeded in handling almost the entire crop of honey, thus breaking up a clique of dealers who formerly put their own prices on the article and crowded out legitimate competition. During the two preceding years the same firm exported over 1,500,000 pounds of honey, and large quantities of wax.

There are now in the province of Havana nine modern apiaries containing about 1,700 colonies, and others are being started in different parts of the island. The country around Nuevitas, in the province of Puerto Principe, has the name of being the finest part of the island for bees, as large quantities of honey and wax are brought from there in coasting-vessels. From what the writer has seen of the island, there is very little territory where bees do not do well, unless it is where there are a great many sugar-mills, and the surrounding country is all taken up with sugar-cane, and unless the place is overstockt with bees the writer thinks there are few places where 10 gallons per colony cannot be obtained.

The price in Havana markets ranges from 40 to 50 cents per gallon, net, the buyer paying the cost of package. The crop is all handled in hogsheads of from 100 to 105 gallons each. In any good location 300 colonies can be kept without overstocking, and with the exception of during the extracting season, from Dec. 1 to March, one man can care for two such apiaries, provided they are of easy access.

There are also difficulties to be taken into consideration, but, as all bee-keepers know, many of them can be overcome by the judicious use of that one quality—vigilance. One of the main things necessary is to keep the colonies all supplied with young and vigorous queens, thereby freeing them from the ravages of the moth, so much feared in tropical countries.

As there is no time during the 365 days of the year (except when it rains) when the bees cannot get out and find something to carry in, they can be increast very rapidly. During the rainy season, especially the latter part of September and October, when we are sometimes visited by storms and rain which last several days, it is necessary to watch the bees closely, and sometimes feed the weaker colonies, for the high winds bruise and toss about the nectar-yielding plants so much that there is a scarcity of flowers, and those which are short of provisions are liable to succumb before Nature gets back to her usual conditions.

When the rainy season closes in November, the flowers begin to give a variety of color to the luxuriant vegetation, and from then until March there is nothing to do but to take out honey, as the bees store it so fast that the queens are kept restricted to the lower story. In March and April some honey is also extracted, but the queens begin extending their domains, and swarming commences, altho the swarming-fever does not get so bad here as it does in the northern climes.

Last, but not least (altho they are very small), is the ant problem, which is one of the most important to the Cuban bee-keeper, especially during the rainy season, for they take refuge by thousands under and in the hives, and often cause weak colonies to abscond.

Another important matter to take into consideration here is the cost of living, which is at least 50 percent more than in the United States. With the exception of sugar and tobacco (the staple articles of export) almost everything is imported; not that the country cannot produce everything needed, but on account of the total destruction of rural wealth and the depopulation of the country, there is nothing planted, and what were once productive farms are now abandoned to weeds and grass. This, of course, is only a temporary condition which will disappear when the tide of immigration turns this way.

On Aug. 10, 1899, bee-hives were placed on the free list of importations, and altho the duty on them was not excessive, this will doubtless give an impetus to the industry. But even if Cuba does take the lead as a honey-producer, as long as the duty of 20 cents per gallon remains on extracted honey it will not enter American markets, for while Europe can pay even 40 cents per gallon, net, in Havana, Cuban dealers cannot pay 20 cents per gallon duty, freight and cost of package, and compete with American honey at 60 and 65 cents per gallon.

So far there has been very little comb honey produced here except for the home market in Havana, which is very insignificant, as Cubans are not great honey-eaters.

Campanilla honey is as white and equal in flavor to any in the world; and when comb honey is put in nice

shape by specialists it will undoubtedly win for itself a name and place in the American markets equal to the finest of white clover or basswood honey.

FRED L. CRAYCRAFT.

W. A. Selser—The writer of this paper has made a statement that I cannot agree with. He says as long as there is a duty of 20 cents per gallon on Cuban honey there would not be enough honey brought in to hurt our market. This is incorrect. Cuban honey, when baked in a cake, will hold moisture longer than American honey. I believe in calling things by their right name. When the war with Spain first broke out I was afraid that Cuban honey would come in faster, and I here say that I consider our new possessions a curse, and I could substantiate what I say. Now, these are facts we have to face. How we are to solve these problems I do not know. Another thing the writer says is, that we might place Cuban honey in two classes. Cuban honey will never be used extensively in this country on the table, because it is so dirty. It is packt in, chuckt in, dirt and all, but when it comes in a cake we don't see the dirt. Now, I believe we might find a new market among people who do not use honey.

Mr. Abbott—Permit me to offer one suggestion. The honey that Mr. Selser refers to as being unfit for table use is what is used by the natives. The flavor is fine. The question is, Is that likely to be shipt North? I hardly agree that it is harder to keep bees in winter than in summer.

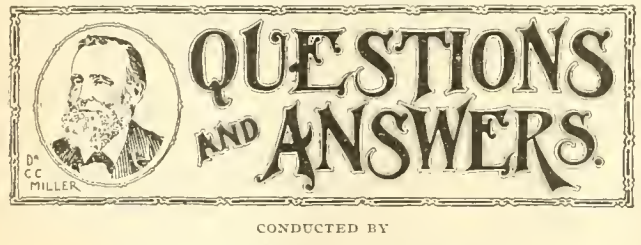
O. O. Poppleton (Fla.)—That is the fairest and best article I have ever heard on this subject.

Dr. C. C. Miller (Ill.)—The statement that this honey is good only for bakers settled any doubts in my mind, but when Mr. Selser says one firm used 12 loads, is there not cause for uneasiness? That probably is not the only firm that uses large quantities of honey.

Mr. Selser—We have a baker here in the city that uses it, also bakers in New York.

I. J. Stringham (N. Y.)—I know one firm that ordered 200 tierces of honey (100 tons), and I do not consider that the locality is well developt. That is the first year that the New York market has taken anything in comparison, on account of the 20 cents duty.

[Continued next week.]



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Queen Laying Irregularly—Wild Touch-me-not.

1. I have a young queen just commencing to lay, and she lays one, two and three eggs in a cell. Why does she do that? Will she be a good queen to keep, or would I better destroy her and unite the bees with another colony?

2. I enclose a flower that grows quite plentifully on the low land around here, and the bees work on it from morning till night. Can you tell me its name? Does it furnish honey or pollen, or both? INDIANA.

ANSWERS.—1. Don't be in a hurry to kill the queen. It is not unusual for a queen to be a little irregular on first commencing to lay. Very likely she'll come out all right. A week or so ago I found in one of my hives a comb with no eggs or brood on one side, but the other side was well supplied with eggs, most cells having more than one egg, and some having four or five, no other comb having brood or eggs. After the eggs hatcht out only one larva was found in each cell, and I think the queen will get over her foolishness.

2. Wild touch-me-not, I think, but I don't know its value for honey or pollen. If bees work busily on it, you may be sure it is valuable for one or both. If you see no pollen on their legs, then you can count it a honey-plant. If you see pollen on their legs, then watch and see if the bees seem to be sucking nectar as well.

Queen Daughter Varied from Her Mother.

One of my neighbors, wishing to rear a few queens, placed a frame of young larvæ in a queenless colony, and as soon as the cell-cups were built, I transferred the frame to a colony of black bees, they being allowed to complete the cells, which in due time hatcht and produced young queens, some of which were nearly black, others very brown, being decidedly different in color from the mother, which is supposed to be pure Italian and produces beautiful 3-banded workers. Why did the young queens look so "shady?" Were they contaminated by the black nurses? MASS.

ANSWER.—It is the rule and not the exception that the royal daughters of Italian queens vary in appearance from their mothers and from each other. It is not likely that the black nurse-bees were in any way responsible, altho some hold that traits are transmitted by the nurse-bees.

Queen Superseded.

As I had a queen that was not giving me the returns I desired, I sent for another, and when I went to remove the old queen, after smoking at the entrance, I raised the super and the first thing I saw was the queen on top of the frames, helpless, but she lookt large and prolific. On raising the frames I found eggs and brood in all stages. She died in about six hours. In 24 hours several cells were started. The new queen was accepted at once. What could have been the matter with the old one? She was full of eggs.

MISSOURI.

ANSWER.—I don't know. Perhaps nothing more than old age. It is probably the usual thing that queens are superseded while they are still in apparent vigor and "full of eggs." Indeed, many a queen is superseded when the beekeeper can see no reason for her supersedure, but it may be that the bees are wiser, and are able to foresee her coming failure. Remember that in the ordinary course of affairs every queen is superseded when from two to four years old.

Winter Preparation of Bees, Etc.

1. What time must I prepare my bees for winter?

2. How many pounds of honey should each colony have for winter?

3. When must I begin feeding for winter?

4. Which is the cheaper, 20 pounds of extracted honey or 20 pounds of syrup made of coffee A sugar?

5. Must the frames be as they were all summer—the most honey on the sides?

6. Must I examine them during the winter? I will leave them on summer stands.

7. How often should bees be examined thru the spring and summer?

8. What is a colony of bees worth in a new Langstroth dovetailed hive (fall and spring)? TENNESSEE.

ANSWERS.—1. Preparation for winter should really begin about Sept. 1, or even the middle of August in some places and some seasons, by seeing that the bees have plenty of stores for winter. Packing or other preparation of that kind may take place as soon as the weather becomes too cold to allow the bees to fly nearly every day.

2. For out-door wintering not less than 30 pounds of honey.

3. Just as soon as you are satisfied that bees will gather no more than will supply their daily needs, even if that's in August.

4. That depends altogether upon the prices you have to pay. It will take about 14 pounds of sugar to make a syrup equal to honey, so you can answer the question by finding out which will cost less, 14 pounds of sugar or 20 pounds of honey.

5. They will do all right just as they are. Farther north it may be advisable to have the honey all on one side.

6. No; do the best you can to have them well supplied and tuckt in for winter; then let them severely alone till warm weather comes in spring.

7. There is no one price for all localities. In some places they are worth twice as much as in others. Consult the prices named at different times in the advertising columns of this journal, and you will have some idea of the matter.

"Woodcliff," or Home Apiary of nearly 300 Colonies, belonging to Mr. Wm. A. Selser, near Philadelphia, Pa.

GEORGE W. YORK, Editor.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Philadelphia Convention Notes.—On Monday afternoon, Sept. 4, we started from Chicago for the 30th annual convention of the United States Bee-Keepers' Association. Like many others, we went over the magnificent Pennsylvania railroad, arriving in Philadelphia about 6 p.m. the following evening, after a ride of 27 hours. We immediately went to Franklin Institute. At the entrance were found Messrs. Doolittle, Hutchinson, Selser, Mason, E. R. Root, Coggshall Bros., Abbott, and others. By the time the convention opened quite a respectable number had gathered. Pres. Whitcomb was on hand, as well as Mrs. Whitcomb and Mrs. Mason.

The convention started out well, and bespoke a good meeting. All seemed ready to take part in the discussions, especially Mr. Selser, who feared the harmful results of the importation of Cuban honey upon the honey markets of the United States. But more of this will appear in the report of the convention proceedings.

Drs. Miller and Mason, as well as Mr. Abbott, did much from the start to put life into the meeting. Pres. Whitcomb was ready to do his part, and Secretary Mason had his hands full in looking after the program.

The Philadelphia Bee-Keepers' Association, composed of some 80 local apiarists, "did themselves proud" in entertaining the visiting members of the convention. Special mention should be made of Messrs. Wm. A. Selser and Secretary Hahman. They were untiring in their efforts, and lavish in their expenditure of time and money.

Mr. Selser lives ten miles north of the city, where he has his apiary and honey-bottling works. Of these latter we will have more to say later. Mr. Selser took six members home the first night, and nine the next. And all were royally entertained. Mrs. Selser is a charming hostess, and every one fortunate enough to be a guest at the Selser mansion was delighted. We know of at least *one* member who felt so much at home that he really didn't care to leave.

We must tell "one" on Dr. Mason. He took supper at Mr. Selser's the next day after the convention. At the table Mrs. Selser, in her winsome way, said that she was glad that one bee-keeper had finally come that could eat a hearty meal. She seemed to think that none of the other Western or Southern bee-keepers who had been there had good appetites. But Dr. Mason made up for all the rest. His capacity was ample; and his ability to cause tempting viands to disappear was remarkable. Mrs. Selser appeared to be satisfied, tho Dr. Mason certainly must have been uncomfortable.

Prof. H. W. Wiley delivered one of the very best addresses we ever had the pleasure of listening to at a bee-keepers' convention. It was on the food value of honey, its adulteration, etc. Prof. W. is the chief chemist of the Department of Agriculture at Washington, D. C. We hope to be able to publish his address in full. It will be read with great interest and profit.

Mr. W. E. Flower, a member of the local association, and also the able conductor of the apiary department in American Gardening, gave an illustrated lecture on bees and bee-keeping, the second evening of the convention. He began by throwing upon the canvas a picture of the great Langstroth, and spoke in eloquent and fitting terms of his life and work. Then followed pictures of apiaries in and around Philadelphia. It was a very interesting feature of the convention, and Mr. Flower deserves a vote of thanks for his effort. It certainly was appreciated.

One picture showed Mr. F. manipulating the frames with bees in his own apiary. He said that just before the photograph was taken he wanted to go to the house and put on his "other clothes," but concluded that anybody could see that those were not his other clothes, so he let it go. His talk was punctuated with many such dry hits that simply captivated his hearers.

Another one was when he showed a picture wherein one visitor among the half-dozen or so in it seemed to be making a quick movement. Mr, Flower said that he was *stung in the rear*—but he quickly corrected himself by saying that he was in the rear when stung. The audience must have finally concluded that both statements were likely correct, for when they fully comprehended the joke, they simply let themselves loose with a roar and hand-clapping that were deafening.

We should have mentioned before that during the first session, Tuesday evening, the local association, at no small expense, had provided some fine musical talent in the way of solos. A lady and gentleman each sang twice, we believe, and all seemed to appreciate their singing very much. There was a good attendance at that first session, which augured well for the success of the annual gathering.

The following day after the convention Mr. Selser took us and several others in his two-seated carriage, with high and fast stepping sorrels, about a 30-mile drive over the surrounding country, which is covered with the mansions and estates of the wealthy Philadelphians, such as John Wanamaker, Mr. Curtis, of the Curtis Publishing Co., publishers of the Ladies' Home Journal; also a Mr. Harrison, of the Havemyer sugar trust, the latter's castle costing about three hundred thousand dollars. Also we saw Mr. Cramp's place, one of the great ship-builders. But perhaps the most delightful of all was the drive along the old Wissihickon River. It was by far the finest ride we ever had.

We stopt a few minutes at a little, old hotel which was there in Washington's time, and no doubt he used to stop there when he went that way. The drive-way for some ten miles winds along the beautiful river with its ever changing scenery of grand old trees, jutting rocks, deep cuts, and high ledges. All united made a scene long to be remembered. Everything is kept in its original beauty, no one being allowed to touch a thing, or even to carry off a fern or other memento of the aged surroundings.

On Saturday, Sept. 9, we spent the day in Atlantic City, N. J. It was the first time we had seen the sea, and being in such a famous summer resort where thousands of visitors bathe in the surf, of course we had to don a bathing suit and enjoy it with the rest. We not only got into the Atlantic Ocean, but some of the Atlantic Ocean got into us. It tasted very bitter, too.

In the evening we returned to Philadelphia, and the next day attended John Wanamaker's Sunday school, known as the greatest in the world. "John" was there, and about 4,000 more who were regular members of the school. Mr. W. is the superintendent. It is indeed a most wonderful Sunday school. Be sure to visit it if you are ever in Philadelphia on Sunday. It is located at the corner of 22nd and Bainbridge streets, and meets at 2:30 p.m. It was indeed a fitting close to our stay in the old "City of Brotherly Love."

We shall always remember our visit to Philadelphia with much pleasure, and hope some time to be permitted to go there again, and stay longer.

But next year (don't forget it) the bee-keepers' convention will be held here in Chicago, at the same time as the Grand Army encampment. Then we want to see the largest gathering of bee-keepers ever known in this country.

Bees in Paraguay.—U. S. Consul, Hon. John Ruffin, writing for the American Bee-Keeper, from Ascuncion, Paraguay, South America, says this about bees in that part of the world:

"There are several kinds of wild bees in Paraguay, some of which build in subterraneous holes, the rest in hollow trees. Two years ago a colonist made a trial, to improve one of the latter, by gathering them into a proper hive, apparently without satisfactory results. If not all, at least some kinds are said to be without a sting, but one, a black bee of medium size, attacks the intruder by clipping the hair as if cut with scissors.

"Some years ago a German, von Gulich, introduced the European bee, and succeeded well, using modern hives according to Dzierzon's method; his widow has continued this industry, and a few colonists followed with more or less success. Honey finds ready sale at good prices, likewise the wax, which is used extensively for making candles and matches."

The Flatness of the Honey Market is attributed by R. H. Mitchell, in the Country Gentleman, among other things, to the quality of the honey marketed. It is the same thing that hurt the cheese market, the effort to increase quantity without regard to quality. "Honey left in the hive until sealed up by the bees is one thing, but honey extracted as fast as stored and sealed in a glass package is quite another."

Langstroth on the Honey-Bee, revised by the Dadants, is a standard, reliable and very thoroly complete work on bee-culture. It contains 520 pages, and is bound elegantly. Every reader of the American Bee Journal should have a copy of this book, as it answers hundreds of questions that arise about bees. We mail it for $1.25, or club it with the Bee Journal for a year—both for only $2.00.

The Premiums offered on page 606 are well worth working for. Look at them.

Dr. S. C. Schmucker, of the Department of Biology of the State Normal School at West Chester, Pa., delivered a bee-lecture at the Mt. Gretra Chautauqua, July 18. Dr. Schmucker is an earnest and enthusiastic nature-lover, and has gained many disciples among teachers in the public schools, especially for Nature Study. The talk was entitled, "A Co-operative Community." The life history first of the bumble-bee, and then of the carpenters and leaf-cutters formed an interesting introduction to an account of the manifold activity of our hive-workers, with their high social organization.

* * * * *

Mr. McNay in a "Crow's"-Nest.—Rambler, the versatile writer from California for Gleanings in Bee-Culture, was visited by Mr. F. McNay, of Wisconsin, last winter, when the latter bee-keeper was "doing" a portion of the Pacific Coast. It seems they spent a night with a Mr. Crow, one of California's bee-keepers. Here is the way Rambler "Crow-ed" about the matter:

"The uncapping-can handed down by a former owner was so novel that it took the eye of Mr. McNay. It was merely a rude frame with a gunny-sack attacht to the upper portion. A slit in the bottom of the sack allowed the attachment of a good-sized dish-pan perforated with many holes. Mr. McNay said they had no such things in Wisconsin. One of the honey-houses was a substantial affair, and built of stone. A stone honey-house is a very desirable building in this country. It is cool in summer, warm in winter, fire-proof, and not handy for burglars to break thru and steal.

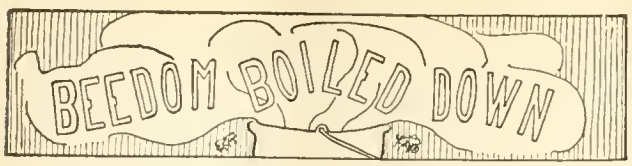
"After the honey-business had been discust to a considerable extent, we were shown the adjacent gold-mines. Mr. Crow's mine was in the course of development; but a neighbor miner had cut a tunnel several hundred feet into the mountain, and had a large amount of low-grade ore in sight. Mr. McNay was informed that the mine could be purchast for about $40,000. Now, if the mine had been worth two or three hundred thousand dollars Mr. McNay would have used a portion of the fortune he has accumulated from the honey-business in Wisconsin, and purchast the mine; but he did not want any cheap $40,000 mine on his hands.

"After our arduous day's work, tired Nature asserted her rights, and we prepared to go to roost, and Mr. Crow insisted upon giving up his nest to us. Mr. Crow is not a tall man, and his nest was made according to his needs. I could manage the nest very well; but tall Mr. McNay had to make rafters of his legs, or poke his knees out in front or into my ribs, or project his feet out at the foot of the nest. He managed very well until he dropt asleep, then his feet would start right off toward Wisconsin, and hang out like twin specters in the dim moonlight. Having in mind the old adage about keeping the head cool and the feet warm, I was extremely anxious for his welfare, and anxious to have him return in safety to Los Angeles and Mrs. McNay.

"To allow a man to expose his bare feet all night, even in California, is no trifling matter, and the case was more aggravating when we consider that Mr. McNay was a tenderfoot. My only remedy was to give my nest-fellow a shake, and shout, 'McNay, pull in your feet!' He would promptly obey every time, and keep right along snoring.

"Mr. Crow had curled himself up in a cot on the other side of the cabin, and he soon began a snoring duet with Mr. McNay. Between the nasal music and the care of my companion's feet, I slept hardly a wink during the night. In the morning Mr. Crow remarkt about my haggard appearance; but I knew if I told them the cause of my sleeplessness, they would both contradict me right from the shoulder, and I suffered in silence."

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.



Hoffman Frames seem to be quite popular in Australia. In the Bee-Bulletin its objections were askt for, and one thought the spacing too narrow; another objected to the propolizing and the difficulty of uncapping with so wide a top-bar, but the greater number had no objection.

Straw for Smoker-Fuel is used by some Wisconsin bee-keepers, says the Bee-Keepers' Review. A good fire is started in the smoker, and then the straw is jammed in. It burns a long time, and is not so hot as wood. A burning straw-stack, smouldering for days, suggested the idea to Mr. N. E. France.

Setting Bees to Work in Shallow Extracting-Frames before Putting on Sections, is a plan highly commended in Gleanings in Bee-Culture, but the British Bee Journal does not think it advisable, as by the use of one or more bait-sections bees can be induced to work with sufficient promptness in sections without first using extracting-frames.

"**Victory Thru Defeat**; How the Association Has Scared the Adulterators in Chicago," are the head-lines of an editorial in Gleanings in Bee-Culture. The editor quotes at length the report of the case given in this paper on page 552, takes heart from the result, and ends by saying: "Hurrah for the Association! Give it your support with dollars."

Crimson Clover, says R. L. Taylor, in the Bee-Keepers' Review, is chiefly valuable as a "catch" crop, should never be sown in spring, but as early in July or August as the ground is moist enough, and may be cultivated in at the last working of corn, or harrowed in on oats stubble as soon as the oats are off. He says: "It blooms here [Michigan] the latter part of May, the following year, in time to be followed by corn. At that time it is a great aid to the bees. It is excellent food for all stock, *except* when dry it is dangerous for horses, as the large heads are liable to become impacted in the stomach."

Foul Brood Cure.—In the Bee-Keepers' Review, Mr. Taylor refers to the directions for curing foul brood by H. W. Brice, the British authority, as lately given in this department, the cure involving 24 hours' confinement, re-hiving, re-queening, and feeding medicated syrup daily for at least two months. Mr. Taylor then says: "That should please Editor Root in point of safety, but it would be a great and unnecessary burden, and is neither science nor economy. To shake the bees into a hive furnisht with foundation during a honey-flow, keeping all infected combs and honey strictly from other bees, is just as safe, with one-tenth the trouble and expense."

Do Queenless Bees Start a Succession of Queen-Cells?—A "Stray Straw" in Gleanings in Bee-Culture is as follows:

"Editor Hutchinson says his bees don't do as mine do. His start all cells at nearly the same time, and so nearly of an age that they emerge from the cells within the same two days. As he's a queen-breeder and I'm not, that shook my confidence in my own observations. But that veteran queen-breeder, Henry Alley, who has reared many more queens than both of us put together, says I'm right. He says: "When I have removed a queen from a colony for the purpose of introducing another, I find, after waiting three days, cells nearly ready to cap, while there are others just started."

Fences versus Plain Separators. Gleanings in Bee-Culture has the following "Stray Straw:"

"A surprise has met me. A dozen or so supers were filled with sections, one side old-style sections with plain separators, the other side with plain sections and fences. In every case where there was a difference, and I *think* there was a difference in every case, in some cases a markt difference, the difference was in favor of the old style, the bees beginning sooner and finishing sooner. I don't understand it. I could understand it if there were no difference, but why the bees should do worse with freer communication is beyond me. Is it pure prejudice on the part of the bees? [This is indeed a surprise when most of the reports have seemed to be the other way. But in the interest of fairness and truth, I desire that this item should be as widely circulated as the items of the other character. *If* there is any advantage in a solid separator, such separator could be used with the plain sections; but in that case it will be a cleated separator. But plain sections with the same filling are preferred by the buyers. I take it that you yourself are partial to tall sections, from what you say on page 601, and that you are afraid that you will have to adopt them. Is it the tallness or the general appearance of the boxes, or what, that makes you think that way?—ED.]"

Introducing Queens.—Editor Hutchinson has had reports from a number of customers who have introduced queens by means of the wire-cloth cage, with the wires thrust into the comb. There were a few failures because the cage was put on comb not old and tough enough, and the bees gnawed under to the queen before they were ready to accept her. But most failures came from opening the hive and looking up the queen in a day or two after she was releast, to see if she was all right. The disturbance alarmed the queen, she ran and squealed, and the bees took after her. Then the next time the hive was opened she might be missing. Mr. Hutchinson is very emphatic that a colony should be left entirely undisturbed for several days after the queen is releast—until she has fully regained her normal condition and is thoroly establisht as queen of the colony.

As additional security, W. H. Pridgen proposes leaving to the bees the job of releasing the queen. Make a hole thru the comb back of the cage, fill it with candy, and the bees will do the rest.

Tin versus Wood for Extracted Honey.—"The American Tramp" objecting in Gleanings in Bee-Culture to the square cans for extracted honey, the editor replies in part as follows:

"It is G. W. York, editor of the American Bee Journal, who is arguing for square cans as against kegs and barrels; but as I agree with him in the main I come in for my share of your criticisms.

"In the first place, let me say that Mr. York, altho it is not generally known, handles large quantities of extracted honey. Indeed, I venture to say that he has had considerably more experience with square cans, and kegs and barrels, than any dozen average producers all together, and his verdict is emphatically in favor of the tin packages.

"One of your objections to the square cans is the difficulty of getting honey out of them; and that, therefore, the dealer will not sell from them because of that fact. Why, my dear sir, square cans have honey-gates the same as kegs and barrels; and the matter of convenience in retailing is, to my notion, far ahead of the leaky wooden things. Nearly all of the dealers' catalogs will be found to illustrate a very neat little honey-gate for square cans, costing 15 cents, or mailed for three cents extra for postage. Every user of square cans should supply his grocer with one of these little gates; then the operation of drawing a pound, a quart, or a gallon, is as simple as putting up so much sugar."

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Root's Column

The New Edition

—OF THE—

✻✻✻ A B C ✻✻✻

—OF—

BEE-CULTURE

Now Ready

Before the next issue of American Bee Journal is out we hope to have the new edition of the A B C book in the hands of those who have had their orders with us so long. The new book will be, in many respects, far ahead of any of the previous editions, both in typographical appearance and general subject-matter, for we are now building upon the knowledge and experience of these latter days, when such wonderful developments have been made all along the line.

The subjects of "Apiaries" and "House-apiaries" have been recast. "Crimson Clover" is a new subject. The subject of "Bees" has been enlarged to take in *Apis dorsata* and other races of bees. "Comb Honey," as well as "Comb Foundation," has been rewritten from beginning to end, besides considerably more being added. The subject of "Hive-making" is entirely recast. In the former editions, only one hive was described in detail. This was followed with matter showing how to make hives, sections, etc., by *power* machinery. No particular hive is now described in "Hive-making," and the matter is simmered down to the processes of cutting up stuff on foot-power and light-power machinery. As to dimensions, the reader is advised to send to some manufacturer for a sample standard hive in flat, and from the parts of this secure his measurements. "Hives," an entirely new subject, contains a description of all the best ones. Among them may be seen the old-style Langstroth, the Simplicity, the Dovetailed Langstroth in its various forms; the Danzenbaker, the Heddon, the Dadant, and, under this head, large and small hives. This is followed by a discussion on double-walled or winter hives. Various principles are illustrated, all the way from the loose to the closed-end frame. The subject of "Hives" is followed by three more new subjects, "Honey as a Food," "Honey Cooking-recipes," and "Honey-peddling."

The new book contains the same number of pages as the old one, and will be sold at the same price—$1.20 postpaid; or clubbed with GLEANINGS IN BEE-CULTURE for one year for $1.75.

ADDRESS

THE A. I. ROOT CO.

MEDINA, OHIO.

In the multitude of counsellors there is safety.—Prov. 11-14.

Foul Brood and Pickled Brood.

Query 104.—1. Briefly give the location and effect of foul brood, giving one or more causes. 2. The same as to pickled brood. COLO.

Eugene Secor—No experience.

Mrs. J. M. Null—No experience.

Dr. J. P. H. Brown—No experience.

Prof. A. J. Cook—I don't understand.

Mrs. L. Harrison—Have had no experience with either.

R. L. Taylor—Your question is quite unintelligible to me.

O. O. Poppleton—Have no experience with either disease.

S. T. Pettit—I don't know enough about either to write about them.

W. G. Larrabee—I have had no experience with either foul or pickled brood.

G. M. Doolittle—Get Howard's treatise on foul brood. Too long for this department.

Dr. C. C. Miller—See back numbers of this journal, and get Dr. Howard's foul brood pamphlet.

D. W. Heise—1. Leave this for the foul brood experts. 2. Read up Dr. Howard on pickled brood.

Adrian Getaz—1. See Dr. Howard's foul brood book. 2. See American Bee Journal of Sept. 10, 1896.

J. A. Green—Read the books and articles on this subject. There is not room here for what is askt for.

J. A. Stone—1 and 2. I have never had any experience with either, and so know nothing about them.

A. F. Brown—1. Thruout the brood-nest. Effect—destruction of the colony. 2. No experience with pickled brood.

C. H. Dibbern—1. In my more than 30 years' experience I have never seen a case of foul brood, and personally know nothing about it.

R. C. Aikin—1. What do you mean by "location?" It is in the larval brood—kills them. I do not know the cause, except infection. 2. I think I never saw it.

J. M. Hambaugh—1. Foul brood is a microbe disease, transmitted thru honey infected with the organisms. 2. As to pickled brood, it may happen from various causes.

E. Whitcomb—Plenty of it in this locality. Brood dies instead of maturing, generally while in the chrysalis stage. The colony soon dies of old age. Robber-bees carry it from infected colonies to stronger ones. 2. I don't know.

Emerson T. Abbott—I have had no experience with foul brood, and have seen only one case in all my experience with bees. In fact, I am glad to be able to say that I know but very little about the diseases of bees, from experience.

C. Davenport—1. I have had no experience with foul brood, and sincerely hope I never will have. 2. Pickled brood severely

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Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
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Crimson Clover	55c	.90	2.00	3.50

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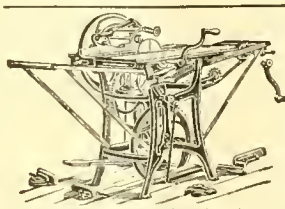

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affected most of my colonies one season, and to a less extent the next; it cured or disappeared of itself. Various remedies I tried did not seem to help matters any. I don't know the location: the effect is to weaken a colony. I don't know the cause.

G. W. Demaree—There has never been a case of "foul brood" (so-called) in central or northern Kentucky, except a few cases near Cincinnati, O., on the Kentucky side of the Ohio River, and therefore I have never seen a case of "foul brood."

Dr. A. B. Mason—1. The "effect of foul brood" is to depopulate the colony if badly affected. There is but one cause, and that is contagion, and the foul brood is located in the brood, and is caused by foul-broody boney. 2. I don't know anything about it.

J. E. Pond—2. I don't know anything about pickled brood. 1. As to foul brood, it has been so fully described in works on apiculture and the bee-papers of the day, that I advise the study of the subject from them. It would require too much space to give an intelligent answer here.

Rev. M. Mahin—1. Foul brood is *located* in the brood-nest of a bee hive, and among the brood. The effect of it is to kill the brood and ruin the colony. There is only one cause—contagion. 2. I do not know anything about pickled brood, but I know more about foul brood than I want to.

P. H. Elwood—1. The immediate cause is the bacillus peculiar to the disease. Any weakness or filth, I suppose, renders bees less able to throw off or resist the disease. Dead brood without the bacillus present does not cause it. 2. Pickled brood in its earlier stages resembles foul brood. Later it lacks the ropiness and characteristic odor of foul brood. One will never run into the other. Pickled brood is sour; foul brood is not.

Mrs. A. J. Barber—1. Location—wherever bees have had access to foul-broody combs or honey. Its effect is to destroy the brood, thus ruining the colony. I have handled a great many cases of foul brood, and have come to believe that it is always caused by bees having infected combs or honey given them, or by robbing such combs or honey. In short, it takes foul brood to start foul brood. 2. I have had no experience with pickled brood.

E. S. Lovesy—1. It is a disease of the brood. The living bees are not affected by the disease, but when they come in contact with it they can carry it on their bodies and introduce it to the larvæ of any hive they may enter. The effect is, if it is not cured it will cause the destruction of the colony. Under certain conditions the cause is sometimes thru foul or rotten brood. 2. Pickled brood with us floats in the atmosphere like typhoid fever; when it is prevalent it may strike any locality. Here in Utah, as a rule, a handful of equal parts of salt and sulphur sprinkled over the brood, from one to three dressings, will cure this disease.

GENERAL ITEMS

Did Only Fairly Well.

Bees did only fairly well this year—50 to 80 pounds of comb boney per colony, for good colonies; in old-fashioned "gums," only 0 to 15 pounds per colony.

H. I. McCoy.

Columbia Co., Ark., Sept. 5.

Have Had a Pleasant Summer.

We have had a pleasant summer so far, and had it been a wet season the crop of honey would have been immense, for the weather was just right for nectar-secretion.

The anxiety of the many buyers of

honey is very unusual, proving the scarcity of honey; and yet prices are not high, considering the shortage in the honey crop.

M. H. MENDLESON.

Ventura Co., Calif., Aug. 29.

Drouth Stopt Gathering.

Bees did fairly well this season. I will get 2,500 pounds of comb honey from 55 colonies, spring count. The present great drouth has stopt all gathering of honey for over a month. WM. M. DICK.

Ford Co., Ill., Sept. 5.

Bees Doing Nothing.

Bees have done nothing since the middle of July. They are eating their stores, and if it keeps on this way we will have to feed soon. FRED ROBY.

Hall Co., Nebr., Aug. 30.

No Honey This Year.

I have no honey this year. Bees came out in the spring in fine shape—10 colonies, all wintered well. I shall not get honey enough to pay for the Bee Journal. It was too dry here in June, which is our honey season. Bees are working well now, but will not store more than enough for winter. F. D. KEYES.

Hampshire Co., Mass., Sept. 1.

Too Dry Weather for Bees.

My bees have not done any good for the last two months, because of dry weather. Last spring they did well. I have gotten only 10 pounds of honey from seven colonies.

I could not get along without the American Bee Journal. It is all right.

G. W. MAUK.

Oklahoma Co , Okla. T., Sept. 9.

Bees Wake Up Denver People.

[Mrs. Emma Woodmansee, of Arapahoe Co., Colo., sends us the following exciting experience with a swarm of bees, which appeared in the Denver Evening Post early in July:

In some favored, flowery section on Capitol Hill, in a populous bee-hive, a queen-bee was born, and there was a buzz of rejoicing.

At high noon to-day, the queen attained her majority, and, in obedience to the suggestion of her courtiers, sallied out of the hive with the entire junior generation at her heels to find a new home for her clamorous subjects.

The party took a westward course and, the wind being fair, it went humming straight down Sixteenth Street.

At the intersection of Curtis and Sixteenth Streets the queen's courtiers espied the little yellow truncated pyramid on which the street-car flagman takes his rest. He was taking it as the bees came along.

"My eyes, if it ain't a hive!" exclaimed the queen's privy counsellor.

"It is," said the queen, "and a brand new yellow one. We will camp right here." And they at once began to do so.

"What the div—? Wow!" cried Flagman Patrick J. Walsh, as an inquisitive honey-maker climbed into his trouser leg and gave him a pointer to get up.

"Whoosh! Shoo away from here!" he yelled.

But the bees wouldn't "whoosh." There had been bees since God said, "Let there be light," and there would be bees when Patrick Walsh had ceast to be. What cared they for Patrick Walsh? They didn't do anything at all, but just piled into that pretty new hive at every aperture, and Mr. Walsh moved away at a lively rate.

"There were eight million, nine hundred and seventy-seven of 'em by actual count," said he.

A little fuzzy dog saw the people gathered on the four corners watching the swarm and boldly went out to investigate. "I don't see nothin' but a few bees," said he to himself, as he went up close to the box and gave it a sidelong glance. And then 43 bees with one accord lit on him, and such another "Ki-yi" as he let out had not been heard since the Fourth. He went down Sixteenth Street at a speed impossible to estimate. Before anybody could get a watch on him he was gone.

"I never see sich a sudden, evanescent dog in my life," said a man who peept from behind the mail-box on the corner.

Then the cars came from four directions. Every time one past thru the swarm there were, "Oh, Lordy's," and shrill shrieks, "We e-e-e!" like that. And still the bees swarmed.

"I'll get 'em out of the way," said a little man who knew all about bees, and he rusht out and pickt up the box. "All you have to do," he called out, cheerily, "is to hold onto the box till the bees all get in and then carry 'em off. They're—oh, holy, jumpin' je-hoshyphat!" he concluded, and dropt the box and ran.

Later the police were called out. Officer Hunt took a broom and stood holding it up in the manner of liberty enlightening the world. That is, he held it up for awhile and then the bees held him up, stampeded him and he had to retire.

Meanwhile the crowds thickened at the corners.

"It's the busiest day we've had in Denver for 10 years," said a man who had made a run for it from Joslin's Corner to Scholz's drugstore.

At last somebody got a bucket and substituted it for the box. He turned the receptacle bottom upward and hived the most of them and carried them off, chased hotly by those remaining outside.

The casualties were 860 cases of feminine fright, and 138 good, old-fashioned bee-stings.

[For downright fun, commend us to the sight of a swarm of bees among a lot of people who know nothing about them, and this includes the average newspaper reporter who always overworks his imagination, as is clearly shown in the first two paragraphs of the foregoing "bee-story." But then, that is usually their part of the fun, which also makes it all the funnier for the bee-keepers who read it. Laughing is a healthy exercise. That is our excuse for republishing this Denver wake-up. We trust that all our readers will enjoy it as much as we have.—EDITOR.]

Just Rolling in the Honey.

Bees are just rolling in the honey. We are getting one of the best flows we have had in four years. A. J. FREEMAN.

Neosho Co., Kans., Sept 12.

Bees Did Very Well.

Last winter I lost half of my bees, and the balance, 10 colonies, were in poor condition; I increast them to 17 colonies, all in good condition at present.

Basswood lasted 15 days; it never was better, but there were not bees enough to care for it. The fall flow seems very good. Clover didn't yield any nectar. Honey sells like hot-cakes. I extracted 400 pounds, and had 24 pounds in sections.

A. F. KRUEGER.

Washington Co., Wis., Aug. 11.

No Fall Surplus—Bees and Grapes.

There is no surplus honey for this fall. Bees are working on buckwheat and goldenrod, doing their best to lay up a store for winter.

I wish some of our scientific bee-keepers would help me out of a controversy that I had with a neighbor. He took me into his grape arbor and showed what the bees had

SUFFERERS

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Write at once. Enclose return stamp.

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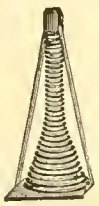

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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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Langstroth Hives and everything pertaining to same.

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Address, GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

done with his grapes. I tried to convince him that the bees had merely carried the juice away, but did not pluck the grape. His reply was that he saw with his own eyes the bee pluck the grape with its mandibles. I told him I would give him one dollar a bunch for every one that the bees would pluck, to be laid in my bee-yard.

F. McBRIDE.

Hardin Co., Ohio, Sept. 17.

Common Figwort.

Please name the plant specimen which I enclose. The plant grows to a height of from five to nine feet; commences blooming from the middle of June to the first of July, and continues till frost. The bees are continuously at work on the flower of the plant from daylight till dark.

Platte Co., Mo. J. L. LEWIS.

[The plant is the common figwort, which will be found illustrated on page 368 of my "Bee-Keeper's Guide." It is surely one of our best honey-plants. The flower will often be found full to the brim of nectar. It is not a showy plant, but as "handsome is that handsome does," it is fine.—A. J. COOK.]

The Man Who Drinks.

The Memphis Commercial Appeal says: "The business world recognizes that no man who drinks is as good as he would be if he never drank. Time was when in certain lines of business it was considered necessary to drink. Quite on the contrary is the case now. Even saloon men prefer bar-keepers who do not drink the liquids they sell. All the fairy tales about the great things people do when under the influence of liquor have been exploded. The orator who must be intoxicated in order to make a speech is no longer here, and he has never been here. The lawyer who cannot plead a case or cite an authority with-

The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)

(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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HENRY ALLEY,
37A3t WENHAM, ESSEX CO., MASS.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

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out spending the night before in a bar-room, has gone to visit the pale glimpses of the moon, and he has always been gone. The writer who produces a great poem or a great essay while mandlin, was removed from this planet before the command, 'Let there be light!' was given. The book-keeper, clerk, mechanic, salesman, artisan, young or old, is not at his best while under the influence of liquor, and he is not as valuable to himself, his employer, or society. In the race of life the temperate man has the best of it; the drinking man is handicapt. The sober man is always an improvement on the drunken man."

Convention Notices.

Utah.—The Utah Bee-Keepers' Association will hold their semi-annual convention in the City and County Building, Salt Lake City, Oct. 5, at 10 o'clock a.m. A full program in the interest of the industry will be presented. All are invited. Some prominent bee-keepers are expected to be present, and one or more meetings may be held at the State Fair.

J. B. FAGG, Secretary.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Fine Golden 5-Banded QUEENS

I have 300 which I will sell at 45 cents each; $2.50 for 6; $5.00 per dozen, while they last. I am breaking up my nuclei. This will not appear again, so if you want **Pure 5-banded Queens cheap**, you had better order AT ONCE.

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as it is getting late in the season, and soon will be time to unite nuclei, so order QUICK. All Queens warranted purely mated, and by return mail, safe delivery and satisfaction guaranteed. Price of Queens, 50 cents; six for $2.75; $5.00 per dozen. Selected Queens, 75 cents each; six for $4.00. Selected tested, $1.50 each. My Queens are prolific and their bees excellent workers.

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Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire. Its Cause and Prevention. Price, 10 cts.

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Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others. Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Sept. 7.—Fancy white comb honey, 15c; No. 1, 13@14c; light amber, 11@12c; dark and amber, 9@10c. Extracted, white, 7@8c; amber, 6½@7c; dark, 6@6½c. Beeswax, 25@26c.

Consignments of small lots of comb honey are becoming more frequent, and while there are some who will not buy at the prevailing price, yet a fair trade is being done; this also applies to extracted honey and beeswax.

R. A. BURNETT & Co.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb, 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Aug. 22.—Demand good for new crop comb honey, excepting buckwheat. We quote as follows:

Fancy white, 14@15c; No. 1 white, 12@13c; fancy amber, 11c; No. 1 amber, 10c. Extracted firm at unchanged prices. Beeswax dull at 25@26c. HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾c. light amber, 6½@7c. Beeswax, 26@27c.

Market is firm at unchanged quotations, with demand fair and offerings light. The last Panama steamer took 312 cases extracted for New York. The ship Centesima sailed with 349 cases for Liverpool; another took 4,000 lbs. beeswax.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c.

A. B. WILLIAMS & Co.

BOSTON, Sept. 8.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 12@13½c; No. 2, 11c. Light amber extracted, 8@8½c; amber, none to quote. Beeswax, 27c.

Practically no new comb honey has been received as yet, and stocks are steadily being reduced, so that there is really no honey on hand, with quite a little inquiries. We strongly advise shipments of comb honey to be made as early as possible. BLAKE, SCOTT & LEE.

BUFFALO, Sept. 10.—Extra fancy one-pound comb sells well at 13@14c choice, 11@12c; dark, 10 cents down, as to grade. Demand much better. Receipts light. BATTERSON & Co.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.

PEYCKE BROS.

DETROIT, Sept. 11.—Honey-producers accustomed to selling in Detroit have hard work to satisfy local trade. Very little honey in market. White comb, 14@15c; dark, 12@13c. White extracted, 7½@8c. No dark wanted. Beeswax, 23@25c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

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which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for
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Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

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What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.
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Portland Seed Co.....Portland, Oregon.	J. L. Gray.....St. Cloud, Minn.
E. T. Abbott,.....St. Joseph, Mo.	Pierce Seed and Produce Co.....Pueblo, Colo.
L. C. Woodman.....Grand Rapids, Mich.	F. Foulger & Sons.....Ogden, Utah.
J. Nysewander.....Des Moines Iowa	R. H. Schmidt & Co.....Sheboygan, Wis.
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The L. A. Watkins Merchandise Co., Denver, Colo.

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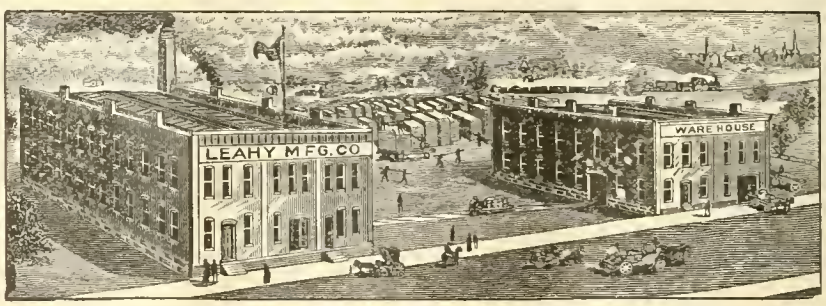

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., SEPTEMBER 28, 1899. No. 39.

CONTRIBUTED ARTICLES

The Home Bee-Yard--Quadruple Hives.

BY E. FRANCE.

THIS picture shows a part of our home yard of Langstroth hives, made to hold four colonies each. We work them for extracted honey, 8 frames in a set, 3 tiers high, making 24 Langstroth frames to each colony. We could use them higher if we wanted to, but we think 3 is about right.

How do we manage those hives? I will commence in the spring of the year. When fruit-trees and dandelions are in blossom we set our hive-tent over one of the hives, put all the brood into the bottom story, honey into the second story, empty combs up into the third story, and clip the queen. If there is more brood than enough to fill the bottom story, we give it to any colony that lacks enough brood to fill the lower part (8 frames). We aim to have every colony have 8 brood-combs at this time of the year, and we usually find enough brood in the yard to give all eight brood-combs, and have some to make a few new colonies, after going over the yard in this way.

We don't do anything more until we find they are getting more than a living. If there is clover, about June 15 we go over the bees again, see that all have 8 brood-combs, and make new colonies with the surplus brood-combs.

Now, if we have a good flow of honey from clover, we will soon commence to extract, keeping the brood in the lower story, and extracting from the two upper ones. We watch the honey-sources closely, and aim to have the upper set of combs full at the close of the basswood honey-flow.

I used to take off the third stories in September or first of October, and see that the second story was full of honey, but the last two years I have left the third stories on full of honey, and find the bees have wintered splendidly in that way. They came thru the winter strong, and no spring feeding needed to be done.

If you want to winter bees out-of-doors, give them a large hive, and a good deal too much honey is just enough. If the bees don't use up all the honey you will get it when you begin to extract.

We use barrels to store our honey in. They are much the best, easier to handle, and safer. Grant Co., Wis.

The Honey-Bees Do Not Injure Grapes.

BY C. P. DADANT.

ANOTHER heavy grape crop is now on the vines in this vicinity, and yet we do not hear the usual complaint about bees eating grapes. It looks as if the uneducated grape-growers had at last come to the conclusion that the bee-keepers are right when they assert that bees cannot puncture sound grapes. But such is surely not the case, and the silence of the grape-growers comes from the fact that no damage is being done this year, for the very simple reason that, in this vicinity at least, the weather has been so dry that the grapes are not bursting, and altho the honey crop is short in the uplands, the bees have no occasion to annoy the horticulturist, for there are no damaged grapes for them to work on. The birds themselves, having a great abundance of wild cherries, of which they are very fond, do not carry on their usual depredations in the vineyard. It is only when the grapes are being pickt and

Quadruple Hives in Mr. France's Home Bee-Yard.

prepared for market that a few of the berries are bursted in handling, and a very few bees may be seen about them.

The prejudice among grape-growers in regard to the bees is very deeply rooted, and will take years to eradicate. Too many people judge of things by superficial observations, and decide a question by appearances and not by facts. When grapes are damaged, either by bursting, from rains, which send an extra amount of sap in the vine, or by the inroads of birds—thrush, cat-bird, quail, robin, etc., the bees take the blame, because they bodily take possession of the damaged fruit in broad daylight; and yet their role is only to save that which would otherwise be lost. But it is most difficult to convince the vineyardist that they are not the original causes of the trouble.

I remember being taken to task by an old Frenchman—a very good friend of mine, I must say—for keeping so many bees which were entirely destroying his crop of grapes, and his hopes of filling his cellar with the nectar dear to all Frenchmen. He said that if bee-keepers could not be made to see the folly of their ways, a law should be past forbidding any one from keeping any more than 20 colonies of bees on one farm. "I have studied the matter," said he, "and I know exactly how they do. They always make two holes in a berry, one exactly above the other."

Upon this I protested, and held that it was the quail that made the two holes with both points of its beak. I even tried to show him, and it was plain to any one who was not entirely prejudiced, that the punctured berries were all on the same side of the bunch, because the holes had all been made, probably in the space of a few seconds, by a bird that had enough and amused itself, like bad boys in a melon patch, by plugging what it could not eat. But the bird had gone, and the bees were there, and it was of no use to try to defend them, when they were so willing to be seen. So my arguments, which I considered as conclusive and convincing, only served to make the man angry, and he would not speak to me for a year or more.

But what is the actual physiological position of the bees in regard to fruit? The honey-bee has mandibles or

Mandible of Hornet.

Mandible of Honey-Bee.

jaws, in the form of spoons, working vertically instead of horizontally, as in animals. These mandibles are horny and entirely devoid of teeth. They can be used only for the usual purposes of the hive, to mold the wax, build the combs, and handle and carry out any debris. They can use them to tear the corolla of blossoms or even leaves, and they also can tear cloth, by taking hold of imperceptible protruding threads and pulling them out, one after another, till a hole is made. But the hole that they make in a piece of cloth is ragged and uneven, it is torn, not cut. They have no sharp, saw-like jaws like those of hornets, and it would be as impossible for them to bite into the smooth skin of a fruit as it would be for a man to take a bite out of a smooth wall.

We have had as good chances as any one, perhaps, to make remarks and take observations on this subject, for we have had both bees and grapes, on a large scale, for 33 years in this country. We now have a vineyard of 13 acres, with an expected crop for 1897 of 30 tons of grapes. We have an apiary of about 90 colonies of bees on the same farm, and altho we have to be careful, when we crush our grapes to make wine, not to leave the juice exposed, we can say that we have never been to any real inconvenience by reason of the bee's love for grape-juice.

So give honor to whom honor is due. The bee is not the enemy of the horticulturist, but his friend, and I am glad to say that the better informed horticulturists have long ago found this out. The others will come to it, but it may take years to convince them of their mistake. It is a subject which must be brought before the public at regular intervals until the truth is taught in our public schools. It is as necessary to teach this as it is to assert that the earth turns around the sun, for those are facts which are absolutely positive, and yet cannot be proven by careless and casual observation. Hancock Co., Ill.

[The foregoing article was sent to us early in September, 1897, and for some unaccountable reason was not publisht. We are very glad to place it before our readers at this time, especially as the question of bees and grapes has been referred to of late in these columns. Mr. Dadant is entirely competent to speak on the subject, being a high authority on both bees and grapes.—EDITOR.]

Carniolan Bees, Dadant's Langstroth, Etc.

BY PROF. A. J. COOK.

THERE is no doubt that the Italian bee is a very great favorite with nearly all our American bee-keepers. Its peaceful habit, energy in gathering, courage to defend its hive, and ability to get honey from flowers not within reach of the common bee, have given it a wide and just reputation. I have never had experience with more than one other variety that was at all comparable with the Italian, that is with the Syrian.

The Syrian bee was thought by many to be too cross, but, after a little experience, I found it as easy to manage the Syrian as the Italian. While I think the Syrian is as good a bee as the Italian, I was never sure that it had any considerable superiority.

From my reading, I have long had a desire to know more of the Carniolan bee. Its reputation for amiability, activity and vigor, and especially its ability to withstand cold weather, seemed to give it superior excellence; indeed, so far as I know, there is only one disadvantage to this bee, and that is the tendency to over-swarming. As over-swarming results either from over-crowding of the hive or some discomfort within the hive, it may, in the hands of the wise bee-keeper, be no serious objection. If the Carniolan is so prolific that it speedily fills the hive with bees, and thus leads to swarming, surely that would be a recommendation. If lack of shade and over-heating leads the bees to leave the hive, then that objection could easily be remedied.

It was my pleasure, during the latter part of last July, to be in the East, and an exceeding pleasure to visit the apiary of Mr. Frank Benton. I there saw a large number of Carniolans from imported queens. As always before, when I have seen the pure Carniolans, I was very much pleased with their appearance. Their very large bodies and light-colored rings, formed by the gray hairs, make them indeed very attractive.

As I had never had any chance to study them I was of course interested to investigate their most pronounced superiority—amiability. We went to the hives late in the evening—Mr. Benton said it might as well be in the night—opened the hives with no smoke, and examined them without any bee-veils. As is well known, bees are often angered by quick motions or jars. Mr. Benton lifted a frame half way from the hive and let it drop, and yet there was no show of anger. He also struck at the bees with his hand, and blew on them roughly, and yet there was no show of resentment. From the size, beauty and amiability of these bees I am ready to regard them with much favor.

Mr. Benton—than whom there is no better authority—informs me that they rank with the Italians as honey-producers. He says that the comb is as white as that of the black bees, as these bees, like the black bees, leave a little space between the honey and the capping. Mr. Benton acknowledges that they do have the swarming instinct a little more pronounced than the other races, yet he thinks that this is induced, often, at least, by over-heating in the hive, and will give no trouble if the hives are properly shaded.

Mr. Benton also told me, a fact of which I was well assured before, that the pure Carniolan would never have a show of the yellow bands seen in the yellow races or the hybrids. In case the yellow does appear there is certainly some taint of blood, usually Italian.

From all my reading, and from what I learned from Mr. Benton, I believe that the Carniolan bees are well worthy of trial, especially by those who are timid when working with bees. I feel myself that I would like to go into the queen-rearing business, did my duties permit, and confine my attention to this race of bees.

DADANT'S "LANGSTROTH ON THE HONEY-BEE."

While visiting the American Bee Journal office, in August, the editor put into my hands the fourth edition of this excellent work. It divided my attention as I sped across the country on my homeward journey with the wondrous scenery of the Rocky Mountains. It is certainly a most admirable book. It called to my mind so vividly my

first reading of Langstroth's marvelous book, and the intense pleasure that I received from reading it.

Many years ago that grand man, Mr. Langstroth, spent a week with me at my home. He told me he wisht to have his book revised, and askt my advice as to the best person to undertake the task. After thinking the matter over, I suggested Chas. Dadant & Son. I am very sure that this book proves that I was not unwarranted in so doing. Mr. Dadant's wide and able experience enables him to bring the book up to date, and of course that was all that was needed, or all that any wise person would have undertaken.

There are a few points that I should call in question, which I propose at some future time to notice, but they are none of them material, and I most heartily commend the book to all readers of the American Bee Journal, and to all other bee-keepers.

CLEOME BEE-PLANTS AND MESQUITE.

While coming across the continent on the Santa Fe road, I was much interested in the bee-plants, and especially the ones named above. Cleome integrifolia appeared abundantly from Denver all thru Colorado, and later cleome pungens was quite as abundant. The bees were working on these plants in good numbers in many places. I pickt blossoms and shook them over paper, when there was quite a shower of nectar drops. It will be remembered that I experimented with this plant in Michigan as one of the most hopeful for bee-pasturage. The result was not at all satisfactory. The difficulty seems to be that when there is not natural bee-forage the season will be such that introduced plants will fail to yield honey. Whatever the reason may be, the experiment was an entire failure. The anthers at the end of the stamens in the cleome pungens were green, and the entire flower was very attractive, fully more so, if anything, than cleome integrifolia.

I also saw abundant mesquite all thru Arizona. These plants were not near enough to the railroad for me to see whether the bees were working on them or not. I believe that it was past the time of their bloom, tho a few straggling flowers might very likely linger even to August.

Los Angeles Co., Calif.

The Bee's Eyesight or Length of Vision.

BY P. A. SIOLI.

I WOULD like to reply to (not answer) Mr. Geo. H. Stipp's question, or desire (see page 781—1898) to know something about the eyesight of the honey-bee. All that we know about the eyesight or length of vision is about the eye of the human being, our own genus; that is, where we can claim to have some knowledge indubitably, because here our knowledge is not only based on experimental figuring and investigation by micrometric instruments, etc., but we are able to acquire some positiveness—we have the individual himself to explain and answer questions. Wherever we cannot do this the result is, in my opinion, quite problematic and mere guess-work.

Now, take the eyesight of the human being as a rule; what great difference do we find in the eyes of different individuals—hardly two alike; and how far apart is the length of vision from the most far to the most near sighted one? And is there any possibility of doubt that it is just the same all thru the animal world, bees included? So far as my observation reaches I am sure it is so with horses and dogs.

Well, have some entomologist experiment micrometrically with the bee's eyes, trying to find the length of vision of the species; and after making his observations with quite a number of bees, say 100 to 500, he comes to the conclusion that he found what he was searching for, as the majority of his cases were running the same way; but accident happened to furnish him for his experiments nothing but far-sighted bees, or at least the larger amount of them, and what will be the result of his investigation?

Soon another of the same fraternity will come out with an entirely different result, because he had more near-sighted bees to experiment with. Then follows a lengthy dispute between the two scholars and their adherents, but from a general view scientifically there is not much value in all those investigations, as they do not arrive at positive knowledge without all imagination. "Science sometimes makes great mistakes," says Dr. Mason. That's true.

In my younger years, having the sight of one eye only, I could see with distinctness as far as any person was able to do; I could follow the flying bee for at least 100 feet away, and near by the same; the eyesight regulating itself to suit the distance quite minutely. Now, however, everything is a blur, and the eye is slow on changing distances; 10 to 15 feet is about as far as I am able distinctly to follow a bee flying away.

So, when Mr. Stipp says it is reported that tests of the sight of the condor of the Andes showed he can see at a distance of 100 miles, I would like to know how to prove that; there are no glasses to carry the eyesight of man as far as 100 miles, and with a standpoint on ordinary ground, and with the best instruments, one cannot see further than 30 to 40 miles. That shows that the above assertion is nothing but exaggeration and imagination, and remains with the individual faith whether he may believe or not. But one ought to be slow to take everything for a fact that he sees in print.

To return to the bees: A bee after loading up and taking her homeward flight, certainly is quick as lightning—she beats the carrier-pigeon, but she knows her way, in all probability has traveled it a good many times before; besides she is eager to bring her load home.

Now observe her when she is hunting for nectar in the pasture field. She is in no hurry, making no jumps at all, but easily meandering from one flower to the next, and when there are no more to visit in that immediate neighborhood, she does not move away in a direct bee-line to find more flowers of the same kind, but she scans the ground forward and backward until her sense has discovered the smell of sweets on a new hunting ground. That it is the scent more than anything else which leads the bee on her searches for honey has been shown clearly by Prof. F. Plateau, of Geneva, who experimented with a great number of different honey-yielding flowers, particularly with those of a highly-colored and showy kind, by cutting away their corona leaves or tubes, without injuring those parts which secrete the nectar; and bees, bumble-bees and butter-flies were visiting these flowers and getting the honey out of them after this act of mutilation just as well as before, hardly making any difference with one or two varieties of them, where they circled around just as if they did not know how to attack their crown, tho it was evident that they had the scent of the honey therein. Even flowers that had been hidden entirely by covering them over with leaves or brush enjoyed the visit of those insects just as well. (Bulletins of the Royal Academy of Belge.)

But suppose even that it was possible to ascertain the length of vision of the average bee's eye, it would still leave the question an open one, whether the bee on her swiftest flight could discern the objects she is passing by, and overhead. Who will answer for the little bee? And what good can it be to us if we know? Sonoma Co., Calif.

A Bee, Chicken and Skunk Story.

BY WM. M. WHITNEY.

SOME time ago I promist Editor York to give a bee, chicken and skunk story, and as work in the bee-yard is not crowding, I can give it now; so, here goes.

Allow me to premise by saying, that while the following statement was suggested by the St. Louis chicken story, it is not in the least intended to discredit any of the alleged facts therein, but to give simply my own experience. I will say, however, that we should be very careful in making our observations—lest our deductions be erroneous.

On the farm in Ohio we raised the Barred Plymouth Rock fowls; and the pure-blooded males, when about half grown, are quite light-colored; in fact, some of them at a little distance, would be called white. They had a habit of frequenting the bee-yard, but after awhile the bees concluded their room was better than their company, and drove them out of the yard, "for keeps."

Mephitis Americana also made frequent visits to the yard. I discovered him by accident, and sought a hiding-place to watch his operations. He always came—or, that was when I saw him—immediatedly after a thunder-shower. His movements indicated no fear of the bees, for he was all about the hives, moving in a gentle and quiet manner; neither disturbing the bees, nor being disturbed by them. Hence, the conclusion: *Bees* dislike light colors, but are partial to black. But, hold on a bit. *My bees prefer the society of a skunk to that of the bloodedest cock that struts the yard! Perish the thought!* Let us investigate a little further.

The ground in the bee-yard, while being sward, is very loose and fertile. The chicks found that there were many grubs and angle-worms there, and commenced scratching

for them. Well, do you suppose the bees were willing to have the dirt thrown into their eyes in that way? Not a bit of it; but Mr. Skunk moved about in such a quiet and unassuming manner that he was not in the least molested.

He was there for the same purpose that the chicks were, but he went about his work in an entirely different manner.

It matters not how white the cock is, nor how long his pedigree, he cannot go tearing around among the bees without being told—not in the most polite manner—to please *get out;* while even a skunk, black as the blackest, is permitted to roam about to his heart's content.

Draw your own conclusions. Kankakee Co., Ill.

THE AFTERTHOUGHT

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

ENFORCING ANTI-ADULTERATION LAWS.

No, it's no great occasion for lamentation (or objurgation) that the first grocer arrested got off without a sentence. The Lord himself once let off a culprit undisputably guilty of breaking a plain law—and for reasons which some of them apply in this case. *Nobody had ever heard of any attempt to enforce the law*, tho broken daily by a multitude of offenders, some of them high up in the world. Chicago offenders have now heard of an attempt to enforce. On a new case, committed since the attempt at enforcement, the same justice would not go hunting for an excuse to acquit. When a justice goes on that sort of a hunt there'll quite surely be a squirrel in his bag when he gets home.

SELLING HONEY BY LEAVING SAMPLE.

Glad to hear that Comrade Tyrrell's plan of selling honey by leaving for inspection a sample jar and circulars works in his locality. It may be capable of large imitation. I tested some years ago a plan of leaving circulars only—circulars promising to call with honey on a certain day. No good. Our city people have got beyond reading circulars left with them. But a short circular left with a jar of honey would probably be read in most cases. Page 514.

KEEP HONEY IN A DRY, WARM PLACE.

Does not Mr. Hutchinson make a serious slip in his excellent Country Gentleman article (page 514), when he directs to put a barrel of honey in a cool place? That would be taken to mean the cellar by most readers.

WON'T BE FICKLE ANY MORE ON HIVES.

"Ten-frame hives, which will be my last change." Page 515.

> From Daisy to sweet little Minnie
> I changed, then to dear Lenore;
> From her to several others
> (Not numbering quite a score),
> And now to large-hearted Polly—
> BUT I'M NOT GOING TO CHANGE ANY MORE.

How cunningly Miss Minxie Draper-Barnes will smile when she hears this good resolution!

WORKING WITH BEES MORNING AND EVENING.

It seems to me that Mr. Hilton is off the track in intimating that bees never need attention in early morning and at eventide. Far the most precious portions of the day to the bee-keeper, I should say. But the bee-keeping minister don't need to write at eventide—I don't believe. For writing, use all the early morn that ever you choose; but don't burn your intellectual candle at both ends, unless you are sure that it is a very, very long one. Page 515.

EXTRACTING FROM WAX-WASTE.

What W. R. N. thinks well of on page 519—having cloth without perforated metal hold his wax waste in the extractor, and then throwing it away when clogged—has been my practice for a long time now. Still I'm not happy. There seems to be need of side-drainage in addition to bottom-drainage. Perhaps a tilt once in a while, as the bee-keeper goes by, will be needed in addition to the side-channel.

VALUE OF "HORSE-LIGHTNING."

You're too kind to me on page 522, Mr. York. Mr. Brown *may* try his "horse-lightning" current on me at 6 a.m.—likewise at 8:15 p.m. Increases *value* 175 percent. D'ye hear?

GETTING RID OF ANTS.

The difficulty of destroying ants (Question-Box, page 523) is plainly related to the difficulty of cooking a hare. Locating him may be the worst part of it—and getting hold of him nearly as bad. Moreover, respondents living in the South and far West are decidedly fainter than the others in their shouts of victory—if not inclined to wring their hands in something that looks like agony. Most of us are bothered by ants a little at times, but not quite enough to make us keep our powder dry.

OUT-DOOR FEEDING OF BEES.

On page 525, Mrs. Axtell's out-door feeding seems to be one of the most instructive things in the number. To feed 140 colonies effectively in a box of three-pail capacity is quite a triumph. We think out-door feeding as easy as rolling off a log until we try it—try it a few times, with failure, and then quit. My last failure was owing to the excitement of the bees. More than half of them wouldn't hold still a second—into the honey, and out of it again, in endless succession, till too well plastered and too cold to fly, then on the ground footing it in the sand till they couldn't walk any more. Reckon her success was partly in that frame of lath nailed together, partly hot weather, and most of all in having the bees used to the business.

POINTS ON BEE-HUNTING.

John Piddington's bee-hunting ideas seem good—page 541. Don't be in such a hurry to move off on your line. Catch more bees at the first station. Humor the shy ones by exposing a section outside any box. *Prospect* your lines a good way before making any move of the bait.

YELLOW AND GREEN FLOWERS AS HONEY-YIELDERS.

That "Britisher," page 538, who in effect brands yellow and green flowers poor honey-yielders, would have to readjust his rules for this country. Spanish-needle and golden-rod and Helianthus yield quite a percentage of all American honey. Mustard and rape and white root and dandelion are bee-favorites. The most profuse yielding I ever saw was from yellow flowers (tulip tree). Basswood, our greatest yielder, is a compound of yellow and green—two of the branded colors. Corn and the grasses and grains, which bees visit very much for pollen, nearly all have yellow or yellow-green inflorescence. As for scarlet flowers being never visited by bees, I don't even believe he sees straight for England. Believe I can go to England and see bees just as wildly enthusiastic over scarlet poppies as they are here, and catch just as many bees in the red hollyhocks as he can in the white ones. Hear an impudent Yankee shouting, Mr. Hamlyn-Harris.

THAT UNCAPPING-FORK.

An uncapping-fork, eh? Well, some of us are eminent at working with a knife and fork, and perhaps we need it to complete our outfit. And possibly, indeed, it may be a very valuable addition to work uneven combs. Don't believe it will whisk off smooth combs like a good knife. And most of us will want to "see it go" before taking much stock in it. Page 538.

HERE'S A [illegible] TO EX-EDITOR HOLTERMANN.

And so we are to lose, and Christian evangelism is to gain, one of our editors—Mr. Holtermann. Should have extended my hand and "God bless him" sooner, only I did not see the item till just now. Page 537.

ARRANGING HIVES IN THE CELLAR.

Mr. Davenport's opening article, page 529, is a worthy one. He is rather unique in placing cellar bees six or seven hives high. Still, as he keeps the lowest ones well up from the ground, and don't let them topple over, what's the odds? And so the out-door colonies in his vicinity last winter perisht, every one—fearful cold, and no good flight for nearly five months. Glad I don't live in Minnesota. My observation to some extent agrees with his, that bees (except when from cold they cannot move around) share in true brotherly heroism their last drops of honey, and all perish at once if it comes to that. But (if I'm right) when a *swarm* is shut up in a pit some individuals drop, apparently starving, quite awhile before all are overcome. Wonder if these are not outsiders that joined the swarm

while it was in the air. Otherwise, perchance ill ventilation, or worry, or old age, may be the true solution.

A BLIND BEE-KEEPER'S WAY OF FINDING A QUEEN.

That blind bee-keeper's method of finding the queen coax nearly all the bees away from her with a comb of syrup—may prove worth using by folks not blind, in a few desperate cases of a small and shy black queen, got up in imitation of a squirrel. But a freshly-uncapt comb of new honey *from some other hive* would draw better than a comb of syrup I think. Of course, the thing would have to be managed so gently that the bees not yet drawn would not fill themselves with their own honey. Page 530.

A "PAT" FOR A BOY SWARM-HIVER.

If J. F. Sautter was a boy in 1897 he can hardly be a Methuselah now. Here's a pat for his back. His method of taking and hiving that swarm—well, the oldest of us couldn't have told him a better one. Page 530.

SELLING EXTRACED HONEY EARLY.

Sell extracted honey before the many needs of the winter have taxt the buyer's pocket-book. Right you were that time, Mr. Burrell. Page 531.

ANOTHER HINT FOR "MRS. PENNSYLVANIA."

Dr. Miller, that was a good hint of yours to Mrs. Pennsylvania. For another hint (seeing she still longs for the first good super of honey) let her ask that despised vixen of a queen to tell her children to put it up next season. The chances are that if left alone they are far the best honey-storers in the yard—providing they happen not to swarm. Page 535.

Report of the Central Texas Bee-Keepers' Convention, Held at Milano, July 20-21, 1899.

BY LOUIS SCHOLL, SEC.

The annual convention of the Central Texas Bee-Keepers' Association was held at Milano, Tex., July 20 and 21, 1899. It was called to order by Pres. Aten at 10 a.m., July 10, and Judge J. B. Newton gave the bee-keepers a cordial welcome in behalf of the citizens of Milano, to which Mr. F. L. Aten responded.

There being some time before dinner, the first question in the question-box was taken up.

DO QUEENS LAY IN QUEEN-CELLS?

"Is it a fact that queens lay in queen-cells already started, or do the bees move the eggs?"

Judge Terral said that queens did not lay in queen-cells.

H. H. Hyde had seen evidence that queens did lay in queen-cells, seeing nothing but eggs at times, also cells started and no eggs in them; later eggs were found in them.

G. F. Davidson confirmed Mr. Hyde's views.

F. L. Aten differed from Judge Terral, confirming the views of Messrs. Hyde and Davidson.

E. J. Atchley's experience is that the queen lays the eggs; bees do not move eggs, neither do bees start cells over eggs.

L. Scholl said bees do not start cells over eggs. He tried this when rearing queens. Bees first wait till the egg hatches into a larva, and then construct a cell over it.

A vote was called for on the above question, and the affirmative carried by vote of 4 to 1, the majority in attendance not voting.

"Can a fertile queen be introduced without a cage to a colony with a fertile or unfertile queen, and remain for several days?"

Mr. Hyde recited a case where such was done, and Mr. Atchley confirmed him.

The convention then adjourned till 2 o'clock p.m.

FIRST DAY—AFTERNOON SESSION.

The election of officers for the ensuing year was first taken up, and resulted as follows: E. R. Jones, President; J. B. Salyer, Vice-Presdent; and Louis Scholl, Secretary and Treasurer. The next meeting will be held at Hutto, Williamson Co., Tex., the first Thursday and Friday before the full moon in July, 1900.

THE HONEY-RESOURCES OF TEXAS.

Mr. Atchley gave a good talk on this subject. He said that north Texas was once a good bee-country, but horse-mint is cut off now, and cotton is the main honey-plant. All Texas is a good bee-country, but the south of Texas is the best in the world. He also said that bee-keeping was undevelopt in the South; that large amounts of honey were going to waste, and that the people had to be educated and taught how to keep bees in better ways. Big bee-keepers of experience could do a lot of good by going around and teaching the people how to keep bees, advise them to keep bees as it is more profitable than other pursuits, there being more money in bee-keeping than in raising cotton. It should be the united efforts of all to push it and teach the producer how to produce honey, by reading bee-literature. The question once was, how to sell a crop of honey, but it is different now. It is how to *produce* a crop, as the demand for it is always there. Not long ago the demand for honey was very small, but now it has increast from 10 to 15 times as much. He said that he could have sold about 30 carloads this year, as the demand is so great, but was unable to furnish it.

Mr. Davidson said that a discussion on the honey-flora of Texas was not really necessary here, but gave his experience, as he had traveled a good deal over eastern parts of the State, and found bee-keeping in the most undevelopt condition, and the bee-keepers uneducated. He also found fine ranges of basswood in east Texas, but no practical bee-keepers, and honey had to go to waste. The demand for honey with him was so great that he could not supply it.

THE BEST SECTION-HONEY SUPER.

This subject was then handled by O. P. Hyde. He exhibited a section super generally known as the "Ideal." The super was of the dimensions of the standard 10-frame hives, 5¾ inches deep. In it were seven plain slats 1½ inches wide, and ⅜ inch thick; on each rested five tall, plain sections, filling up the full inside length of the super. In this he uses the Hyde-Scholl No. 2 separators, which he then described, first telling how he liked the fence separator so well when it first came out, as he knew it was good. But he said that his son, and also Louis Scholl, were not very well satisfied with the fence, and so they made a new separator with slats lengthwise like the fence, but instead of cleats across the separator they made an upright slat with little cleats on the edge of the separator where the sections come in contact. This gave freer communication than the fence; bees could go from section to section straight thru and diagonally across in every direction. On account of the upright slat there is more free communication, and, besides, it caused bees to fill sections solid to the wood. He found it the best separator out, and closed by stating that Mr. Root objected to the Hyde-Scholl separators at first, but wrote several favorable letters lately.

Pres. Jones arose to criticise the above. He liked the super; thought that slatted separators that give free communication straight thru from one row of sections to the other row did not cause better filled sections; believed it was caused by something else, and would like to find out. He thinks full sheets of foundation to come within ⅛ inch of the section would be best. He prefers a free-communication separator, and said that there was nothing nicer than a solid section of honey with the comb sealed all over solid to all sides of the section, and the cappings of the outside row of cells all around a fraction beyond the surface of the comb. This is greatly in favor of the Hyde-Scholl separator, as the upright slot allowed the bees to extend the cappings around the outside edge of the comb just a fraction, which gives it the finest appearance. Mr. Jones said the Hyde-Scholl separator allowed the bees to pass all around the edges of the sections, which is the cause of the better filling. The only objection he mentioned was that the wood-separators were hard to clean of bee-glue. Otherwise he endorses the use of this separator, and suggested improvements on it if necessary.

O. P. Hyde said that he was glad Mr. Jones tried to criticise, and thankt him for making a better speech than he himself. He told Pres. Jones that if he objected to the Hyde-Scholl wood-separator he should use the H.-S. tin ones, and he would not have trouble with bee-glue.

Pres. Jones did not mean the H.-S. wood-separators only, as all wood-separators are hard to clean of bee-glue.

He likes the tin ones, and prefers their use if there is no difference or objection to use tin in supers.

Mr. Atchley spoke most favorably on the H.-S. separators as the best before the bee-keeping world now, and thinks it will be years before any improvement can be made on them. He advises beginners to start with it, and that also everybody use some, and give the young inventors fullest recognition. He also thought one-third more honey could be obtained by their use.

PRODUCING COMB AND EXTRACTED HONEY.

The production of comb and extracted honey in the same hive, to take advantage of short and fast flows, was discust by H. H. Hyde. He said he had a method with which some, perhaps, were already familiar. For illustration, 50 colonies are put into winter quarters the fall before with plenty of honey in the hive-bodies. During the main honey-flow 30 are run for comb honey, 20 for extracted. See that all have prolific queens, plenty of room and honey, and no queen-excluders. Just before the fast flow he puts the most capt brood in the lower story, takes the upper story to hives run for extracted honey, replacing these with comb-honey supers on the 30 colonies. He prevents swarming by cutting out cells. After the flow he takes off the section supers and replaces with the extracting-supers.

Louis Scholl read a well prepared article on "The Hive I Use," which was requested to be inserted in regular order in this report. It is as follows:

The Hive I Use.

I will first give a description and the measurements of the hive I use, and then the reasons why such a hive was adopted.

For several reasons I prefer the Danzenbaker bottom-board and cover. These are of the 10-frame size. The hive itself is composed of a series of shallow cases, the same as the standard 5¾-inch 10-frame supers. These cases are 16x20 inches outside, and only 5¾ inches deep, without tin-rabbets. Each case holds 10 shallow frames, standard Langstroth size, but only 5⅜ inches deep, and of the Hoffman self-spacing style. These shallow cases are used as brood-chambers as well as for supers when producing extracted honey. The section supers for comb honey are of the same size and depth, and take the tall sections, plain slats, and free-communication separators, generally known as the "Ideal" super arrangement. Two of these shallow-frame supers are used over a brood-chamber, which makes it a depth of 11½ inches.

Twenty frames in both cases have a comb surface nearly equal to 12 Langstroth frames. This provides a large brood-nest, and from experience I find it not too large, not for my locality, at least. My reasons for preferring this hive and shallow frames are as follows: When producing surplus honey in supers above the brood-frames, especially when producing comb honey in section supers, I have had trouble with the bees filling the deep Langstroth frames with the honey that ought to go into the sections during a slow flow, especially along the top edge of the comb above the brood; and after this honey is once sealed, bees are quite loath to store surplus honey above such sealed stores, causing them to loaf and hang all over the hive. Besides, the queen was also crowded out, as the bees filled the cells with honey from which the young bees had just hatcht.

Now my question was, how to get that honey out of those frames into the sections above. This, of course, could be done by inverting the brood-chamber, frames and all, but it caused both trouble and labor. Besides, I am not a reversible-frame advocate. It can be accomplisht to a great extent, tho, by using a divisible brood-chamber hive, by reversing or exchanging the upper case with the lower one, which puts the honey in the center of the brood-nest, where it is then removed by the bees and carried up above the brood into the section super. By removing this honey the bees also provide more breeding-room for their queen. I think these are some good advantages we have over hives with very deep frames, such as the Dadant-Quinby, and also those Draper "barns," so much spoken of in certain bee-papers.

The "barns" are of the same depth and measurements as my hive, and I cannot see why they compare them to barns, as I do not find them so. Their advocates claim larger colonies of bees and better results for their large combs; object to a division thru the center of the brood-nest, and prefer to have their bees brooding queen's-eggs, larvæ and pupa-bees instead of sticks and empty space.

But why, and for what reasons does Mr. Danzenbaker have his combs built out solid all around to the frame, and then "gouge" a big hole right thru such combs with a butcher-knife, to provide a passage-way for the bees?

Now I like an opening or passage-way for the bees to go thru, from one comb to another, but I surely prefer those long ones, lined with wooden sticks, to those ugly holes right thru the combs.

Well, as I am a shallow-frame advocate, anyway, and after studying the many advantages which they possess over the deep Langstroth, I was tempted to try some hives with shallow frames of the same depth all thru the hive. I have used, and am still using, supers with shallow frames on all of my Langstroth-frame hives, and there is where I learned of their advantages, especially when running for extracted honey.

As this hive is mostly handled in sections or stories, the full supers are easily removed, by smoking the bees thoroly when raising the cover, forcing them down and out of the full super, when it is then taken off, practically free from bees, and there is not much brushing to be done. Then, too, they are more convenient to handle, as they are not so heavy as the full-depth supers.

The shallow frames are easier to uncap, as one draw of the knife uncaps one whole side of the comb, while it takes longer to uncap the deeper frames; besides, they are awkward to handle, and more danger of combs breaking out.

Besides, I prefer shallow frames for dividing, uniting, transferring, queen-rearing, and most other things in the apiary. There is not much use of handling the frames individually, except in a few instances when looking for the queen or cells, or when looking for larvæ for queen-rearing, and the like. Otherwise the hive is handled by sections, and all that is necessary when examining colonies in early spring, or looking for queen-cells later on, or when examining for honey during the honey season, and such like things, is to tilt the upper case back, and one can get a full view of the brood-nest. If there are queen-cells present, they will generally be found on the bottom edges of the upper frames.

Then, too, if the queen needs more room during the breeding season, one of the shallow cases is added, without the bad result of too much room, as is mostly the case when giving full-depth stories. The same is true when giving weaker colonies more room for honey.

Besides the section supers being of the same depth and size, all are interchangeable, and we are not bothered with hive-bodies and supers of different depths.

The section super for comb honey that I use in connection with this hive, is that known as the "Ideal." It takes 35 one-pound plain sections 3⅜x5x1½ inches, which are supported on plain slats, five sections in a row on each slat, taking up the full inside length of the super.

The Hyde-Scholl No. 2 separators are used between the rows of sections and also one each outside next to the wall of the super, when all is wedged up tight by a follower-board and super-springs in the super. This arrangement I prefer, mainly for the free communication offered thruout the whole super. It is the same as the Ideal super just previously described by O. P. Hyde.

My method of manipulation for honey corresponds nearly with the methods applied by H. H. Hyde, and just described by him, or what is known as the Barber plan of producing both comb and extracted honey on the same hive at one and the same time, which plan I myself also conceived several years ago.

I am well aware that there are many who prefer the standard Langstroth frame, but it will be understood that as I produce both comb and extracted honey on the same hive, and at the same time, accounts for my preference for all interchangeable supers.

Some may think that I have made a radical change, while I think I have not, as all these are standard 10-frame shallow supers, and could be used on regular 10-frame hives if found unsatisfactory, which they have not done.

LOUIS SCHOLL.

Mr. Davidson said Mr. Scholl's hive and management for comb and extracted honey is all right, and did not find it necessary to criticise.

Mr. Aday askt Mr. Davidson how he manages to produce comb honey without the use of separators, as he has had bees build their combs crosswise in all six sections when used without separators.

Mr. Davidson answered that he did not use separators and produces fine honey. He is very careful in putting foundation starters in the sections correctly and straight, and exactly in the center. Then he puts the supers on

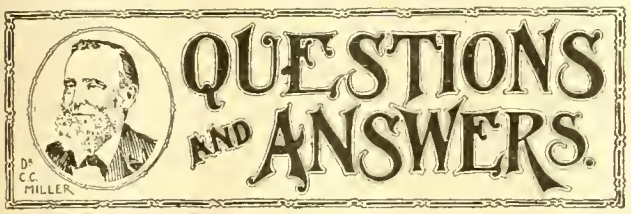
strong colonies that can fully occupy the whole super at once, and during a big, fast honey-flow.

Pres. Jones says that locality has a great deal to do with it. Then there is a difference in colonies of bees to produce straight combs. During slow flows separators are absolutely necessary, and they are always advantageous in producing straight combs.

Mr. Atchley advises the use of separators, as much honey is ruined by not using them. Beginners need them, and with them separators are necessary. Then he prefers to run colonies for extracted honey if not strong enough to fill the super with bees, and not strong enough to produce comb honey in sections.

The convention then adjourned for supper.

[Continued next week.]



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Preparing Bees for Cellar Wintering.

I have been in the habit in the autumn of putting on top of my colonies a section-case in which I put a burlap cushion filled with chaff, a Hill's device underneath the cushion. My colonies are put into the cellar in November in this form. Our house is used only in the summer, and has no fire in it thruout the winter, which is long and severe. The bees are carried out from the cellar about April 20. I have had trouble from moldy combs and hives, cushions, etc., gathering dampness. Would you advise me to continue the use of the cushions, or will there be less dampness in the hives without them? I have thought of filling some of the cushions with mineral-wool, and of putting a quantity of unslackt lime in the cellar, altho the cellar itself is a dry one. The dampness comes from the bees themselves, and a low temperature.

I winter the bees without a bottom board, and cover them with a cage of wire-netting to keep mice out. Any criticism of this method will be gladly received.

NEW HAMPSHIRE.

ANSWER.—I doubt my ability to suggest anything better. The cushions can hardly do any harm, and may do good. The lime and mineral-wool plan is at least worth trying. The main trouble seems to be the coldness of the cellar, and you rather imply that no one is present in winter to keep it warmer. Couldn't you make the cellar warmer by sufficient banking? If the house is unoccupied thru the winter, two or three feet of straw or hay on the floor overhead would make the cellar warmer, but such a suggestion would throw a tidy house-keeper into convulsions. An extra quantity of paper—even several thicknesses of newspapers—would answer much the same purpose. The paper could be under or over the carpet.

What Ailed the Queens?

On page 567, "Mich." asks, "What do you think is the trouble?" referring to a queen that would lay drone-eggs. In reply you do not tell him; you say, "It is to be feared the queens are at fault." Now, we know that, Doctor, without writing to you, but how is the faulty queen produced? and what do those queen-breeders do, or not do, to have such?

Last winter was the worst one I ever went thru. In the spring I had lots of dead bees, and so great numbers of empty combs that I protected from the moth by placing them under strong colonies. That gave the colony unbounded room, and I had no swarms, so I sent to a queen-breeder for 15, and after much delay I got them. I introduced them all right; a few went to laying all right, but seemed afraid of the bees, getting on the outside frame and the most of them were not right. One never layed an egg, finally she was not there, and I gave them a frame with eggs from another colony. Some of the others laid drone-eggs, or worker-eggs in worker-comb, any way; and one all drone-eggs—that one I killed.

Now, I am sure there was something that was not right with that breeder, and he can never sell me another queen, for he is either a man without principle, or he does not know his business. So when I saw the question, "What do you think is the trouble?" and you did not explain, I thought perhaps he is not up to the trick of the trade, but no doubt can find out. So will you please give us the particulars? It is some way connected, I think, with rearing large numbers of queens in an upper story, and not having them strong. ILLINOIS.

ANSWER.—Referring to the first question on page 567, if you *know* that the trouble is with the queen, you know more than I do. It is entirely within the range of possibilities that there may be no queen at all in the case, but laying workers. The only thing to militate against such view is the implied statement that some of the sealed brood is worker-brood. But definite length of time is not given, and it is just possible that the sealed worker-brood may be the work of a previous queen, or it may possibly have been given from another colony.

But the probability is that the trouble was with the queen, and coming to the gist of your question I must frankly say that I don't know what the breeder did, or did not, that made the trouble. Indeed, I don't know enough to know whether the breeder was at all at fault. At the same time it must be confest that in the large number who pose as queen-breeders the probability is that a good many, or at least some of them, don't know their business very well, and it is even possible that, as in all other lines of business, there may be one or more that may be properly clast among the unscrupulous. But the most skillful and the most conscientious breeder may send out a queen that he has found to lay all right, and when the purchaser gets it, it may perform as did the one mentioned.

Without knowing all about the matter, I may mention two points in the case. There seems to be a change sometimes made by a journey in the mails. A queen that lays all right in the hands of the breeder, is in some way so changed by her travels that she lays irregularly or scarcely at all for the purchaser, sometimes recovering in a short time, and sometimes not. I once paid a round price for a queen imported from Italy, and when she got among my bees she wouldn't lay an egg in the orthodox way, but persisted in sticking them on the sides of the cells. Fortunately she changed her behavior in a few days, and did excellent work.

As to the other point, a queen is sometimes so maltreated by the bees in a strange colony as to be unfit to do the work she did before. That may be the case when she has not been jolted thru the mails, but is likely to be aggravated in the latter case.

It would take more space than can be here afforded to tell all that must be done, and all that must not be done, to rear good queens. But I'm not sure that you are making a straight guess when you lay the trouble to rearing large numbers of queens in upper stories. No better queens in the world can be reared than can be reared in the upper story of a strong colony with a laying queen below. But you make a center shot when you add, "and not having them strong." To have the royal larvæ fed in anything but a strong colony is neither necessary nor wise. It is possible that they are correct who say that a good nucleus will rear as good queens as a strong colony—at least it is possible that they are right under some circumstances—but it costs only such a trifle more to have the work done by a strong colony, that a breeder is hardly bright, no matter how dishonest he is, if he does not have his queens reared in a strong colony.

If any one else knows in what way a breeder might be at fault in the case, aside from the ordinary rules for rearing good queens, the floor is yielded.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

GEORGE W. YORK, Editor.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Philadelphia Convention Report is delayed a week on account of copy not arriving in time to continue it in this number. We hope that beginning with next week we may be able to publish it without further break.

Honey Imported into Germany.—The Munchener Bienen-Zeitung reports that in 1896 there was brought into the seaport of Antwerp 1,444,866 pounds of honey; in 1897, 1,562,678 pounds. Of the latter amount United States sent 346,506 pounds.

"Honey Not Advancing, and Why," is the heading of an editorial item in Gleanings in Bee-Culture. Editor Root says prices are not going up as they ought, because commission-houses and honey-buyers are offering little if any better prices than were offered for the big crop of 1897. He says:

As I pointed out in our last issue, when prices are moving upward on everything else there should be a corresponding rise on honey; and if our commission-men can give us a little substantial support we may look for improvement in general prices. In the meantime, bee-keepers should send only to reliable firms. It is the irresponsible cheap Johns—inexperienced, unknown concerns—that move off the honey at any price for the sake of making it move quick.

In all of which he is correct; but it is not so clear that he is correct when he says: "But one, two, or three houses can't advance unless *all* do." A careful observation of quotations thruout the year hardly warrants the belief that there is a general concert of action among commission-men, and the fact that one house sometimes *does* advance or lower the price without any corresponding change on the part of others is pretty strong proof that it *can* do it. There seems to be little question that the honey crop of 1899 is unusually short, and there is no reason to satisfy one in believing that there should not be a material advance in price. Indeed, in some quarters, at least, there is already an advance, but there should be a forward movement all along the line.

Bees, Birds and Grapes is an editorial heading in a recent issue of Gleanings in Bee-Culture. Mr. Root remarks thus upon the subject:

Nearly every year about this time the bee-keepers are met with complaints from their neighbors about how the bees are eating their grapes. It has been pretty well establisht that bees never touch the sound fruit; and until within a year or so it was supposed by all fruit-growers, and even by some bee-keepers, that bees made a small round puncture thru the skin of some soft grapes like the Niagara, and even pierced the more hardy Concords. But two years ago we were successful in finding the real culprit, and that was in the form of a little bird, quick of flight, scarcely if ever to be seen around the vines when any human being was present. This bird, about the size of a sparrow, striped, and called the Cape May warbler (*Dendroica tigrina*), has a long, sharp, needle-like beak. It will alight on a bunch, and about as fast as one can count the grapes will puncture berry after berry. After his birdship has done his mischief he leaves, and then come on innocent bees to finish the work of destruction by sucking the juices of the pulp of the berry, finally leaving it dry and withered up. While the birds are scarcely ever "caught in the act," the bees, ever present during all the hours of daylight, receive all the credit for the mischief.

Grapes broken in handling will be visited by bees independently of any tampering on the part of the feathered tribe; and at such times bees do very often prove to be quite a nuisance; but it may be said, on the other hand, that broken grapes are unsalable anyhow, and therefore this damage is slight if any, and the real mischief or harm done is simply the annoyance caused by the fear of being stung while handling over the bunches in the basket.

On another page will be found an excellent article on this very subject, by Mr. C. P. Dadant. We often wonder if the time will ever come when fruit-growers will cease unjustly accusing the bees of puncturing grapes. But it takes a long time to educate many people when so widely scattered, and also when so disinclined to accept the truth when placed before them. Too many good people are willing to form their opinions simply from the *appearance* of things, not taking the time to investigate carefully and then decide from the facts.

We expect soon to publish some more of the same kind of conclusive evidence that Mr. Dadant gives. It might be a good thing to let your fruit and grape growing neighbors read all that appears in these columns on this subject.

Removing Honey with the Bee-Escape.—In the Progressive Bee-Keeper, G. M. Doolittle gives the following very clear directions for using the bee-escape method of removing honey from the hive, without lifting the supers entirely off:

Many bee-keepers seem to think it necessary to lift the supers entirely from the hive in using bee-escape boards, for ridding the sections of bees. But such a course is very laborious, as well as unnecessary, as there is a much easier way, as well as quicker.

Go to the rear of the hive, having the escape-board, a lighted smoker, a wedge about 8 inches long and 1½ inches thick at the heavy end, and a stout, heavy knife or chisel, the latter being preferable. The chisel I use is what is called a "firmer" chisel, and is one inch wide.

Now with the chisel pry the rear end of the super up a little from the hive, just enough so you can enter the sharp end of the wedge, but not enough so any bee can come out. This gives a crack; open enough so you can send in a

little smoke from the nozzle of your smoker, just enough to drive the bees from the crack you have made.

Next, pry a little harder with the chisel and slip in the wedge till a crack half an inch wide is made. If the frames are of the hanging, loose kind, it is barely possible that some of them may lift up with the super from being glued to it, or from bur-combs. If this happens, you can now catch the chisel between the ends of the frames and the super, and by a little pry cause them to go back on the rabbets where they belong; and if you used a little more smoke just before you did this, no bees will be caught between the end of the frames and the rabbet.

Next, lift a little on the super with one hand and push the wedge up with the other till a crack about an inch wide is made, when you will blow plenty of smoke over the tops of the frames and under the supers, this causing nearly all of the bees to run below or up into the super. Now take hold of the super with one hand, lifting the back end of it till it is at an angle of 45 degrees, when the heavy end of the wedge will cause it to fall to the ground, so you do not need to touch that any more for this operation.

Now pick up the escape-board with the hand at liberty, and put it as far under the super as it will go, immediately lowering the super upon it. Now pick up the chisel and catch the point under the super, when with a little pry, and a pull with the other hand, it is slipt square on the escape-board. Then quickly go to the front end and catch the point of the chisel under the escape-board, and with a little pry and pull, the escape-board and its load are over the hive in the right position, and you have done the whole thing with very little physical exertion, at least not enough but what the weakest of men or an ordinary woman could do easily. The telling of it takes up considerable room on paper, and makes it appear like quite a job, but if any one will practice it on a few hives till he becomes somewhat familiar with it, he will never go back to the old, slow, laborious way of lifting the super off on something, putting on the escape-board and then lifting it back again.

Rosy-Hued Reports of Honey Crops do not receive the entire approval of Somnambulist in the Progressive Bee-Keeper. In his own inimitable way he inveighs against "the wholesale inflation of honey crop reports." One man has a remarkable yield, and that is heralded to China and intermediate places, the bee-papers, as if short of copy, zealously printing and reprinting the story. Then the ambitious supply-dealer parades publicly the great amount of lumber used, hands employed, etc. When the bee-keeper suggests an advance in prices the commission-man confronts him with these rosy reports, and he is dumb. No direct remedy is offered, but a side-thrust given at the inertia of bee-keepers. Please, dear Somnambulist, tell us distinctly just what ought to be done.

Rev. E. T. Abbott, of Missouri, called at our office on his way home from the Philadelphia convention, last Friday. He took several side trips on both pleasure and business, after the convention closed.

* * * * *

Mr. Wm. M. Whitney, of Kankakee Co., Ill., made an apiarian exhibit at the county fair held this month. He received first premiums on both comb and extracted honey. A picture showing himself holding a frame loaded with bees seemed to capture the crowd.

* * * * *

The Convention Photograph, at Philadelphia, was taken by Mr. W. Z. Hutchinson, of Flint, Mich. It is a very good one, and Mr. H. will mail a copy of it to any one sending him 50 cents. The picture shows about 60 of those that were present at the convention, standing in front of the Franklin Institute building.

Mr. L. Kreutzinger, of this (Cook) county, held his annual "honey harvest," as he calls it, Aug. 19. A number of visitors gathered at the main apiary to enjoy watching taking off the sweets from some 200 colonies of bees, and witnessing the manipulation of hives, bees, wax, and honey extracting and packing, and the work of the honey-bee. The event occurs but once a year, to which Mr. Kreutzinger sent about 400 neatly printed invitations with complimentary tickets of admission to his friends and acquaintances, to which nearly every one responded.

Underneath the rows of shade trees, on benches, the guests, men, women and children, lookt from a safe point at the hives being robbed of their sweets, and at the same time sampling the honey offered them in the most liberal quantities, in conformity with a notice posted in the bee-yard, which read thus:

"Visitors are cheerfully invited to partake of as much honey as they desire; those, however, not accustomed to eating honey in large quantities, should partake moderately at first. Every visitor will be served at the table of sweetness from 4 to 7 o'clock, p.m."

About 50 veils were prepared for the occasion for those desiring to look into the hives while supers were being taken off, but many of the visitors had to be without them. Mr. K. exhibited the wonders of the hive to a number of bee-keepers and men of professional experience in the city, and also bee-supplies, some of which he received from Germany a few weeks previous to this honey harvesting event, among them being a papier-mache queen-excluding board; a swarm-bag with self-closer to hive swarms from high trees—a very handy device; queen-nursery, German horse-hair veils, Rietsche uncapping-fork (or comb-rake), isolation-oil for foundation press for deep-cell presses, and other devices of interest.

The hives of bees under the glass in the observatory building, a golden Italian queen-bee in the original mailing-cage, setting up sections and putting in foundation starters, were the principal objects of interest to the visitors.

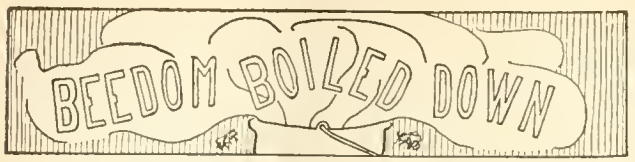
Nearly all of Chicago's leading newspapers made mention of the event, the Evening Post describing the event as a novelty in this industrial world. It also referred to the history of the honey-bee, the principal objects in view at the apiary, particularly the two-story bee-house containing honey, the packing and fumigating rooms, the upper floor for storage, with the cupola as an observatory. The article closed with this paragraph:

"I askt the master of the apiary how he happened to engage in bee-keeping. He said that in Germany it was the custom, in fact an unwritten law, that country school-masters should in addition to the profession of teaching follow the business of forestry, horticulture, or bee-keeping. His father was a teacher and keeper of bees, and the son naturally loves this occupation. He owns three apiaries, the one visited yielding four tons of comb honey, gathered from the wild flowers of the prairies. The subject of bees and bee-keeping is inexhaustible, and I know of no occupation better calculated to develop and foster the Christian virtues of temperance, patience and industry."

We had the pleasure of calling at the apiary towards evening, just after the crowd had departed. Everything indicated a very sweet time. Mr. Kreutzinger sells much honey in this way, the visitors carrying it home with them in cases holding 12 sections. He also receives many orders by mail soon after his annual honey harvest, from those who were present. It is quite a scheme to get a lot of advertising, tho we don't think we would care to recommend it on so large a scale. Generally, to have a crowd around when removing honey is more of a nuisance than anything else. But, as the colored brother said, "Dipperent men hab dipperent ways."

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 621 are well worth working for. Look at them.



The Alfalfa Injured.—W. J. Fulton says that in his part of Kansas there has been too much rain for the alfalfa, a yellow butterfly monopolizes the nectar, and a web-worm webs the buds and bloom into a knot. So the bees have done no good since the first of July, and if the third bloom is no better than the second the honey crop will be almost a failure.—Progressive Bee-Keeper.

How to Wax Rubber Rings.—Dr. Miller said in a Stray Straw that C. Davenport's plan of waxing rubber rings to prevent the leaking of self-sealing cans didn't work in his "locality"—the wax flaked off the rings. Mr. Davenport says in Gleanings in Bee-Culture that the trouble was in having the wax too cold. The wax must be boiling, and the rings just dipt in and instantly withdrawn.

The Best Size of Hive, according to S. P. Culley in the Progressive Bee-Keeper, depends upon three things: Your locality, the sort of man you are, and what you want to do. For a locality subject to drouth no hive will be satisfactory; an 8-frame hive is best where fruit-bloom is plentiful with a fair flow of clover and a fair fall flow; a 10-frame for two very strong flows each season; and a 12-frame for a strong flow from March till October.

A Winter Flow of Honey would seem at first blush, to those whose bees are imprisoned 4 or 5 months, to be a very nice thing. But repliers in the Australian Bee Bulletin seem in general to think otherwise, and G. R. Harrison says:

"After five years' experience of a country where they often have winter flows, I envy those people who are located where they have a decent winter so that they can shut down the hives and forget all about the apiary for from 4 to 6 months."

Bees and Public Schools.—The Progressive Bee-Keeper copies from the American Bee Journal Anna Sundberg's synopsis of our talk about bees in the public school, expresses the hope that we may find time to address more schools, and asks:

"Would it not be a good idea for all of us to follow Bro. York's plan, and see if we cannot have at least one lecture a year on bees, delivered to the children of our public schools?"

"Extra Fancy" Honey.—A nameless writer in Gleanings in Bee-Culture sounds a note of alarm. "Extra fancy" honey has been quoted by a commission man, and it is feared that such quotation will only have the effect to bring down the general price, the extra fancy taking the place of what was before highest, the price of lower grades falling. Is there any such danger, especially as the quoting of extra fancy *was* accompanied by a rise in price of the same? The argument is used that not one bee-keeper in 500 will have any extra fancy, and yet why is that one in 500 not entitled to reward for the superiority of his honey?

The Time Between the Prime and Second Swarm is given by Doolittle as nine days. Critic Taylor, in the Bee-Keepers' Review, thinks that doesn't apply to his locality. He kept track of 10 cases, in which one second swarm issued in 5 days; 2 in 7 days; 2 in 8 days; 4 in 9 days; 1 in 10 days. That makes an average of a little more than 8 days; so there is not so very much difference between them. Possibly Mr. Taylor had in mind that the length of time was not the same in all cases, and that view is hardly held by Mr. Doolittle. It might also be added that in some cases the time is considerably more than 10 days.

Western Manipulation is the title of an article in the Progressive Bee-Keeper by F. L. Thompson. That sounds a little novel, for it is perhaps too much the case that instruction for management is given as tho all places were alike. "With two flows," says Mr. Thompson, "the first beginning June 10 to 15, and the last ending somewhere about Aug. 20, with a not entirely barren interval of two or three weeks between them, this being the condition of thousands of apiaries all over the West proper, it seems high time that we had something else written about management than is applicable to white clover and basswood flows, and that the unqualified talk about 'useless consumers' should be given a rest." Western colonies should continue breeding heavily for some time after June 10, so as to be ready for that August flow. An additional reason for continually large colonies is that the cool nights make the weaker colonies desert the outer parts of the supers, working only in the centers. The habit of Italians, filling up the brood-nest early, Mr. T. thinks a serious fault for the West, and he seems to have a leaning toward Palestines, Carniolans, or Carniolan-Italian hybrids.

How Many Bees for Wintering?—To the question as to how many pounds of bees should be put in a nucleus-box in order to make a full colony to winter over, Mr. Doolittle replies in Gleanings in Bee-Culture somewhat after the following fashion: About 5,000 bees make a pound when the bees are not filled with honey; about 2,500 when the bees are filled. Three weeks before swarming, 20,000 bees make a strong colony, and 40,000 to 50,000 a strong colony for working in sections to the best advantage. A colony good enough to winter successfully must have 12,000 to 15,000 bees, and these, when well filled with honey, will weigh 5 or 6 pounds.

Thick or Thin Winter-Packing.—Most of the Wisconsin bee-keepers cellar their bees, but occasionally one in the southern part or near the lake packs out-doors. R. H. Schmidt wintered 45 colonies thus in the last severe winter with no loss, and attributes his success to the *thinness* of the packing and packing-box. The outside case is made of strips only ⅜-inch in thickness, and the packing is three inches. On the other hand, O. O. Poppleton places great stress upon *thick* packing. Mr. Schmidt says the thin packing allows the bees to warm up enough for a flight on warm days; but T. F. Bingham says bees with thick packing "don't have to" fly.—Bee-Keepers' Review.

Advantage of Clipping to the Breeder.—When a customer receives from H. L. Jones an unsatisfactory queen, he replaces it and asks the return of the faulty one. On several occasions he has had returned queens with perfect wings, when the queens he sent out were clipt, the customers not having noticed the difference. The editor of Gleanings in Bee-Culture commends the plan of having queens clipt before being sent out by the breeder. He says that every year they have been obliged to replace queens that he felt morally certain were all right, but probably destroyed by the bees, their places being taken by inferior queens already in the hives. Clipping would be a check on that sort of thing.

Fastening Foundation in the Top-Bar.—Editor Tipper says in the Australian Bee-Bulletin:

"While in Sydney we saw frames with slits on the underside of the top-bar, sufficiently large to place the edge of the foundation in, and a slip of wood ¼-inch square and the length of the underside of the bar, to wedge the same in. It seemed very convenient and trouble-saving."

Doubtless you would think much more convenient the plan in use in this country, Mr. Tipper. Make a saw-kerf wide enough to receive the foundation, then very close beside it another kerf to receive a strip of wood perhaps 1-16 or ⅛-inch in thickness. You will see that in this case the wedging strip does not touch the foundation at all, and is very easily crowded into place.

Selling Honey by the Section. In Gleanings in Bee-Culture, "American Tramp" says:

Bee-keepers are very foolish to sell their comb honey by the pound. The proper way is to sell it like the retailers, by the section. While in Florida I sold all my comb honey by the section, direct to the retailers. When I first started in, here is about the way I was met by the grocers:

"That's very nice honey; how much do you ask for it?"

"I want 12½ cents each."

"Well, but they don't weigh a pound."

"I did not say they did."

"But honey-sections are supposed to weigh a pound."

"Do *you* sell them by the pound?"

That generally settled it. There was no more said. My sections were 4¼x4¼, seven to the foot, and weighed about 13 ounces each. They sold right along side by side at the same price with the six-to-the-foot sections.

Root's Column

THE

*** A B C ***

—OF—

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1899 EDITION.

The Only Cyclopedia on Bees—475 Pages.

1,000 Already Sold.

The demand for this work has become so great that the preceding edition, consisting of 10,000 copies, was exhausted some months before the new one could be gotten out; and in the 6 months intervening, something like 1,000 copies of the new work have been sold, and that even before it was out of the press. This, the latest edition, reaches the 67,000 mark, and is in many respects very much superior to any previous edition, in typographical appearance and quantity of new subject matter and general revision of old subjects, as we are now building upon the knowledge and experience of these latter days, when such wonderful strides are being made in the arts and sciences.

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No pains have been spared to make this the fullest and most up-to-date bee-book that we have ever gotten out; and the very fact that nearly a thousand copies were sold, even before the edition left the press, goes to show that the general bee-keeping public appreciates our efforts in giving something really exhaustive and up-to-date.

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MEDINA, OHIO.

GENERAL ITEMS

Questions About Honey-Dew.

I want to ask Mr. C. C. Parsons some questions about honey-dew being a natural secretion. (See page 546.)

Mr. Parsons, you say that the most copious honey-dew you ever saw was in 1897, and it was from the pine, and that it exuded from the leaves. Are you certain that it was not turpentine? I think you would better take your ax, go to those pines and cut notches in them, for you will get turpentine much faster than your bees can gather it on the leaves.

Why is it that honey-dew is never on the under side of the leaves, if it does exude from them?

I hope you will tell us more about it in your next. A. J. McBRIDE.

Watauga Co., N. C.

Bees Did Very Well.

Bees have done very well here this season. I have taken 2,500 pounds of honey, and expect to get about 2,000 pounds more, from 30 colonies, spring count.

My bees had the swarming fever badly this year. Some of the first swarms swarmed three times, and some of the old colonies cast three swarms—two swarms two months after casting the first. They have increast from 34 to 105 colonies, and are doing well, with the exception of four that are queenless. EDWARD KNOLL.

Ontario, Canada, Sept. 6.

Quite a Poor Season.

This has been quite a poor honey season—cool and wet all winter and spring, up to about June 15 or 20. Bees built up very slowly on that account, and most colonies were quite weak when there was any nectar to gather. There was but little swarming; and out of 12 colonies, spring count, I will have about 300 pounds of honey, about half extracted; besides plenty of stores to winter on. WM. H. BROOKS.

Snohomish Co., Wash., Sept. 13.

But Little Surplus in California.

There will be but little surplus honey produced in this portion of California, and a good many bees have died of starvation. I have lost about 50 percent of my own during the past two dry years, and I judge from conversations with bee-keepers that there will be fully that proportion lost thruout the county.

Last spring I made up my mind to let them get thru as best they could, but later

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may need new rings, new spokes or new tires. These repairs have to be made every little while with wooden wheels. Stop all this expense for all time by buying a set of our

ELECTRIC Steel Wheels

They are made with direct or staggered oval spokes, broad tires, any height, and to fit any wagon. They can't rot, go to spokes and need no tire setting—last indefinitely. There is only one thing better, and that is an

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Our free illustrated catalogue tells all about both and gives prices. Send for it.

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

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Sweet Clover (melilot)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
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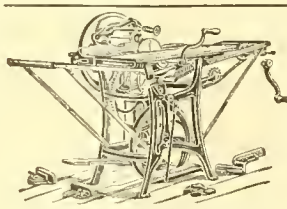

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I HAVE an infallible remedy that will kill the POISON OF BEE-STINGS within THREE minutes after application. Any person sending 25 cents to M. Q., Lock Box 400, SPRINGFIELD, MO., will receive this valuable recipe by return mail. 38A4t

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DANDY Green Bone Cutters with or without gear are the best machines for preparing bone for fowls. **Cut fast, turn easy.** Catalogue and prices free.

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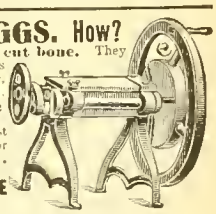

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Italian Queens.

4 and 5 banded, not a hybrid in the yard. Untested, 75c; Tested, $1.00.

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Yellow Sweet Clover Seed!

We have it at Last!

We have finally succeeded in getting a **SMALL** quantity of the seed of the **YELLOW** variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium—

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So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us **ONE NEW** subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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This is your last chance for this season to get

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—OF H. G. QUIRIN—

as it is getting late in the season, and soon will be time to unite nuclei, so order QUICK. All Queens warranted purely mated, and by return mail, safe delivery and satisfaction guaranteed. Price of Queens, 50 cents; six for $2.75; $5.00 per dozen. Selected Queens, 75 cents each; six for $4.00. Selected tested, $1.50 each. My Queens are prolific and their bees excellent workers.

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on I concluded I could not get along without some bees, and fed up what I had left, and have not lost a colony since. I had but two swarms out of 40 colonies, but most of them are now in good condition, and by dividing up the honey I think they will have stores enough for winter. Since the early forage dried up they have been getting their daily "bread and honey" from the eucalyptus (red gum), and some colonies are still storing a little surplus from that source. F. C. WIGGINS.

San Diego Co., Calif., Sept. 11.

Bees Did Nothing.

Bees did not do anything this season. It rained almost all of last month. The fireweed was in bloom then, and the bees did not have a chance to gather much of it.

H. GALLOWAY.

Skagit Co., Wash. Sept. 13.

"Just Simply Stop Breathing."

On page 294 is a quotation with the above title, given by A. P. Raymond. Some of the readers will perhaps be surprised to know that the very same thing, word for word, was publisht in Gleanings in Bee-Culture in the number for August 15, 1888. To the quotation Prof. Cook added this:

FRIEND ROOT:—I heard years ago of the absurdity that holding one's breath would exempt him from stings. I thought at once it was nonsense, but, nevertheless, I put it to the test. It was one of the most conclusive experiments I ever tried. I think the bee appreciated the joke, for I got one of the most painful stings I ever had.—A. J. COOK. ADRIAN GETAZ.

Knox Co. Tenn.

Bees and Honey in Utah.

As far as Utah is concerned, this is certainly an off year, not only as regards the bee-industry but in many other respects. In Salt Lake and several other counties, while the winter loss was not very severe (possibly about 10 percent), the month of May was a terror—it was wet and cold nearly the entire month. Considerable fruit was destroyed, and while possibly not over 25 percent of the number of colonies died, if we take into consideration the weak condition of those that were left, a few of which dwindled and died off in June and

Two Hundred

One-Hundred-Dollar Breeding-Queens, all as good as I sent the A. I. Root Co., ready Sept. 20. One Queen, $1.00; or three Queens, $2.75.

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Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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EXTRACTED HONEY

We are now in shape to buy Extracted Honey, either in large or small lots. Parties having any to offer will do well to sell to us, as Cincinnati is a great market for Extracted Honey. Submit a small sample, stating quantity, style of package, and price expected. Prompt remittances. References:

Western German Bank — The Brighton German Bank Co. (both of Cincinnati, O.)

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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

Wool Markets and Sheep

has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

July, it will make the actual loss of bees considerably over 50 percent. Thru the causes named, the bees of a number of our bee-keepers were slow in building up, and the outlook was anything but flattering for them.

The honey-flow, as a rule, appeared to be all right, but this was of little benefit to the bee-keeper whose hees were not in a condition to gather it; still, with all our troubles, some of the bee-keepers who possibly were more favorably located and who succeeded in buildiug up their bees, said they were getting as much, and in some instances more, honey per colony than they did last year. Six or seven places where I had bees the honey-flow was pretty good, but if we get many more May months like the one we had this year, this county at least will not rank as a bee-keepers' paradise.

E. S. LOVESY.

Salt Lake Co., Utah.

Bees in Good Condition.

My bees are now in good condition, and I received in all about 1,500 pounds of honey. I have increast from 25 colonies to 43.

H. L F. WITTE.

Hennepin Co., Minn., Sept. 18.

A Young Bee-Keepers' Experience.

I contracted the bee-fever in 1897. In April I got two colonies in Hubbard hives, but I did not know how to manage bees except in the old way of letting them swarm and do as they pleased, and I had the bee-fever so badly that I could not rest. I had no books, no papers, no person to tell me anything more about the pursuit than I knew myself. I finally got A B C of Bee-Culture and some modern hives. When the hives arrived I commenced to put them together, and study the book, but the fever did not get any better; in fact it got worse. One of my colonies cast two swarms, and then I transferred the mother colony into one of my new hives, and the other colony cast one swarm. Then I transferred it; this filled my five new hives.

The first swarm that issued stored surplus to the amount of 45 pounds. I packt them on the summer stands for winter, and they pulled thru, but the spring of 1898 they died so that they were very weak in numbers, so the first of May I commenced to feed, and I soon had them strong again. I kept them from swarming by dividiug. I increast to 10 colonies, and in September I built a house-apiary 12 feet square, and moved my 10 colonies into it in November. They wintered well in it.

This year (1899) I increast my bees to 17 colonies, and they are all in fine condition; they have stored a good deal of honey. There is a pretty good honey-flow here at present from fall flowers and buckwheat.

I find one trouble with my house-apiary, and that is, the young queens seem to disappear. I lost three queens out of one lot of seven. I think they must get into the

CHEAP FARM LANDS

Located on the Illinois Central R. R. in

SOUTHERN ILLINOIS

And also located on the Yazoo & Mississippi Valley R. R. in the famous

YAZOO VALLEY

of Mississippi—specially adapted to the raising of

CORN AND HOGS.

Soil Richest IN THE World.

Write for Pamphlets and Maps.

E. P. SKENE, Land Commissioner,
Ill. Cent. R. R. Co., Park Row, Room 413,
30A16t CHICAGO, ILL.

Please mention Bee Journal when writing.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.

J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
Sole Manufacturer,
Sprout Brook, Montgomery Co., N.Y.

The Mississippi Valley Democrat

—AND—

Journal of Agriculture,

ST. LOUIS, MO.

A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

☞ **Write for Sample Copy.**

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Our Great Trial Trip Offer!

3 months for only 20 cents,

WE want to add a lot of NEW subscribers to our list during the next two months, hence this SPECIAL TRIAL OFFER. It is 13 copies of the old American Bee Journal for 20 cents—about a cent and a half per copy. If THREE new trial trippers are sent together, they will be received for 50 cents. We would be pleased to have our friendly readers show this trial offer to their bee-keeping neighbors and acquaintances, and send us a few new subscribers. You will do both them and us a great favor.

The best part of the Philadelphia Convention Report will appear in those 13 numbers.

GEORGE W. YORK & CO., 118 Michigan St., Chicago, Ill.

THE NAME **"WALKER"** on a Vehicle is a Guarantee of Superior Quality. You can buy Walker Vehicles & Harness Direct from the Manufacturer **AT WHOLESALE PRICES.** Shipped anywhere subject to examination and approval. No finer goods made. Our **free book** of 104 pages describes the goods and the plan for obtaining them by our popular method. Send for it today.

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OUR MOTTO: WELL MANUFACTURED STOCK—QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

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G. B. LEWIS COMPANY,

WATERTOWN, WIS.,

CAN FURNISH YOU WITH THE VERY FINEST

Bee=Keepers' Supplies

IN THE WORLD.

Parties wanting goods before new catalog is issued will please write for quotations. We want every **BEE=KEEPER** on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

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Carloads of Bee-Hives.....

Sections, Shipping-Cases, Comb Foundation

and EVERYTHING used in the bee-industry. We want the name and address of every bee-keeper in **America.** We supply dealers as well as consumers. We have Dry Kiln, Improved Machinery, 40,000 feet of floor space, and all modern appliances. We make prompt shipment. Write for Catalogs, Quotations, etc. **INTER-STATE MFG. CO., Hudson, St. Croix Co., Wis.**

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Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.,** that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

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Don't fail to mention the Bee Journal when writing advertisers.

wrong colonies on returning from their wedding flight. Will Dr. Miller, or Mr. Doolittle, tell me how to remedy this matter? I have two-inch auger-holes thru the building two feet apart, and I keep the bees only on the east, south and west sides of the building. On the north side I have a door and window. This building will hold 32 colonies, and I want to increase next year to that number, so I want to know how to prevent this loss of young queens.

JAMES N. ALEXANDER.

Clearfield Co., Pa., Sept. 4.

In the multitude of counsellors there is safety.—Prov. 11-14.

Increase by Dividing or Swarming.

Query 105.—Do you prefer increase by division, or by natural swarming? Why?—ARIZ.

Dr. J. P. H. Brown—Natural swarming.

G. M. Doolittle—Neither. My object now is *no increase.*

Chas. Dadant & Son—By division, because we select our breeders.

Prof. A. J. Cook—Natural swarming, as most convenient and profitable.

R. C. Aikin—By division. It is more convenient; I do it when *I* am ready.

Mrs. L. Harrison—Natural swarming. Because I'm not wiser than the Creator.

W. G. Larrabee—Natural swarming. More ambitious, and nearer Nature's laws.

E. France—We increase by division, then we don't have to keep a hand in our outyards.

Mrs. A. J. Barber—By division. Because increase can be made so much faster by division.

O. O. Poppleton—I don't like either way. I prefer what is known as the "nucleus method."

S. T. Pettit—By natural swarming. Because I would get more honey in that way, and better queens.

J. M. Hambaugh—Could I always be on hand, natural swarming. They seem to work with more vim.

P. H. Elwood—By division. We couldn't manage them in several yards if we permitted them to swarm.

C. Davenport—I largely practice dividing. It is less work, and gives one better control or command of a yard.

Eugene Secor—My study is to *prevent* increase. If more bees are wanted, either method can be made successful.

J. A. Green—By natural swarming, because I generally want as little increase as possible, and keep it down all I can.

D. W. Heise—When I desire increase, I prefer it by natural swarming. Divisions have not been so satisfactory to me.

C. H. Dibbern—Natural swarming. If they don't swarm I do without, as I always get more swarms than I want, anyway.

Dr. C. C. Miller—I would rather never see a swarm. Too much trouble, and swarming interferes too much with the honey crop.

Mrs. J. M. Null—It depends upon the season. During a good honey-yield I prefer natural swarming, giving four Langstroth frames, with sections from the parent colony.

Rev. M. Mahin—If I want much increase, and have empty combs or foundation, I prefer division. If I want increase reduced to a minimum, and want honey, natural swarming. The "why" is very plain. I can make more colonies, and have them in

good condition, by dividing. I will get more honey and less increase by natural swarming.

J. E. Pond—I prefer dividing. The matter will depend largely upon circumstances and conditions. It seems to me to be an individual question, and one that each must decide for himself.

A. F. Brown—Natural swarming for best results in a crop of surplus honey, especially comb honey. If an attendant cannot be given the bees during the swarming season, I would prefer dividing.

Dr. A. B. Mason—By natural swarming, because it is less trouble and secures better results. If you don't want increase and don't know how to prevent swarming, follow the Heddon plan in hiving swarms.

J. A. Stone—Division, because you can divide more evenly than the bees are apt to do it, and while dividing you have the opportunity to destroy any surplus of queen-cells, and detect any wrong that may exist.

Emerson T. Abbott—By natural swarming. If bees are properly managed they will gather more honey, if permitted to swarm in the natural way. If bees, and not honey, was what I desired, I would divide them.

E. Whitcomb—If I desired to attend church on Sunday I would divide, otherwise I consider the natural swarming best. God arranged that for the bees, and when we attempt to thwart Nature a cog is pretty sure to slip somewhere.

R. L. Taylor—By swarming, because I want colonies as strong as possible for the production of comb honey. If I divided I might divide some that would not swarm at all, and dividing would not prevent others from swarming, after all.

Adrian Getaz—By division, for two reasons. 1st, because I can increase just what I want, and when I want. 2nd, because natural swarming occurs at a time of the year when all the bees are needed to gather surplus, instead of starting new colonies.

G. W. Demaree—If I wanted to increase my apiary rapidly, I would practice both the natural and artificial methods of increase. Why? Because then I would not be limited by any iron-jacket rule, and if Nature was tardy I would go forward and accomplish my purpose.

E S. Lovesy—By division, because with proper management all colonies can be kept strong, which cannot always be done here by the swarming method. The swarm, as a rule, is all right, but the old colony is often a failure. But division must not be overdone; if it is workt just right, and if you keep your queens laying, and the bees working, if there is any honey-flow they will bring it in.

For Sale! 90 COLONIES OF BEES — mostly in chaff-packt hives all in good condition. Good willow-herb district, range unlimited. Address MAPLE GROVE APIARY, Crossing, Manistee Co., Mich. 39A1t

Convention Notices.

Utah.—The Utah Bee-Keepers' Association will hold their semi-annual convention in the City and County Building, Salt Lake City, Oct. 5, at 10 o'clock a.m. A full program in the interest of the industry will be presented. All are invited. Some prominent bee-keepers are expected to be present, and one or more meetings may be held at the State Fair.

J. B. FAGG, Secretary.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

Dairy Farm For Sale

consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

The farm is not only a splendid one for dairying, but is also a good location for bees. There is white clover, sweet clover, basswood, etc. The editor of the American Bee Journal has been on the farm and will confirm every statement concerning its value.

Address, for further particulars, terms, etc.,

J. B. AYERS, Libertyville, Lake Co., Ill.
Please mention Bee Journal when writing

FOR SALE!

A small place of 11 acres of land, a good house and barn, with all kinds of fruit, 50 colonies of bees in as good a honey locality as there is in Michigan, the 1899 crop of honey being 1,600 pounds of extracted from 25 colonies, and increast to 50 colonies. Enquire of

A. O. SUTTON, Easton, Shiawassee Co., Mich.
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The Midland Farmer
(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,
Wainwright Building, ST. LOUIS, MO.
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HONEY AND BEESWAX
MARKET QUOTATIONS.

CHICAGO, Sept. 20.—Fancy white comb honey brings 15c; No. 1, 13@14c; ambers, 10@12c; dark, 9@10c. Extracted, white, in cans, 7½@8c; in barrels, 7@7½c; amber, 6½@7c. Beeswax, 26c.

The receipts are increasing and sales are becoming more frequent. Shipments are coming to hand in good order, and when properly prepared will do so until we get zero weather, after which it is liable to crack, and break away from the frames. R. A. BURNETT & Co.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb, 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Sept. 20.—Fancy white, 15c; No. 1, white, 13@14c; fancy amber, 11@12c; No. 1, amber, 10@11c; buckwheat, 9@10c. Beeswax dull at 25@26c.

Demand good for all kinds of comb honey, and ready sale. Extracted in good demand also, excepting buckwheat, at unchanged prices.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾. light amber, 6½@7c. Beeswax, 26@27c.

The market remains unfavorable to the buying interest, and is likely to so continue thruout the season, with supplies of very moderate volume, not only here, but also in the interior.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber. 10@11c.
A. B. WILLIAMS & Co.

BOSTON, Sept. 21.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 13@13½c; No. 2, 11@12c. White amber extracted, 8@8½c. Beeswax, 27c.

New comb honey is coming in very slowly, showing a general shortage all over the country.
BLAKE, SCOTT & LEE.

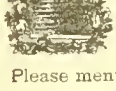
BUFFALO, Sept. 22.—Receipts of honey very light indeed. Fancy 1-pound comb, 14@14½c; fair to good, 12@13c; poor, less.
BATTERSON & Co.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.
PEYCKE BROS.

DETROIT, Sept. 11.—Honey-producers accustomed to selling in Detroit have hard work to satisfy local trade. Very little honey in market. White comb, 14@15c; dark, 12@13c. White extracted, 7½@8c. No dark wanted. Beeswax, 23@25c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

Wanted! Your HONEY We will buy it, no matter where you are. Address, giving description and price,
34Atf THOS. C. STANLEY & SON, Fairfield, Ill.
Please mention Bee Journal when writing.



BEE-HIVES, SECTIONS, SHIPPING-CASES—everything used by bee-keepers. Orders filled promptly. Send for Catalog. **Minnesota Bee-Keepers' Supply Mfg. Co.**, Nicollet Island, Minneapolis, Minn. 18Atf
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BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

TERRAL BROS. Lampasas, Lamp. Co. Tex
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HOG CHOLERA Save Your Hogs. SURE CURE and PREVENTIVE.

We have no medicine to sell, but have an effective remedy which will check the ravages of the plague and **save your hogs.** The disease is caused by a germ. This preparation is a powerful antiseptic which **destroys the germs** without injury to the hogs. The material can be obtained at any village store at the **cost of a few cents.** Any farmer can prepare and apply it. If used in time is a **certain preventive** and a **sure cure** for hogs not too far gone. **Full information** with directions are given in a very valuable work entitled— **"The Hog, by 15 Specialists"** (Price 25 cts., postpaid.) which in addition to giving full details of this remedy furnishes information on every phase of hog raising and marketing by the most eminent authorities, experienced hog raisers and packers in the U. S. and Canada. To save the millions of dollars annually lost to farmers through this plague we desire to give this book the widest possible distribution and at the same time introduce to new readers **The NATIONAL RURAL AND FAMILY MAGAZINE,** America's Greatest Farm Journal for 40 years known as **The Western Rural.** Published weekly, 32 to 40 pages, fresh, up-to-date matter each week. Profusely illustrated. Subscription price $1.00 per year. **Sample paper free.**

We Offer, To send **The Rural** 13 weeks on trial (price 25c) and a copy of the above work (price 25c) to any address for only ..... **25c,** Coin or Stamps

Club Offer, For **$1** we will send **5** copies of each. For **$1.50** we will send **10** copies and a book, and a year's subscription to the club raiser free.

Make up a club of 10 and thus assist in stamping out or preventing the swine plague from getting a foot hold in your neighborhood. Address **THE NATIONAL RURAL, Chicago, Ill.**
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Latest Improvements. Perfect Goods.
Very Reasonable Prices.

Hives, Shipping-Cases Sections, Extractors, Etc.

EVERYTHING A BEE-KEEPER NEEDS. **********

Catalog and copy of "The American Bee-Keeper"—FREE.

—ADDRESS—

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JAMESTOWN, N. Y.

The American Bee-Keeper is a live Monthly, and has been publisht by us for the past 10 years—50 cents per year.

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Here is the Thing you were looking for the last winter

The New Champion WINTER-CASE...

which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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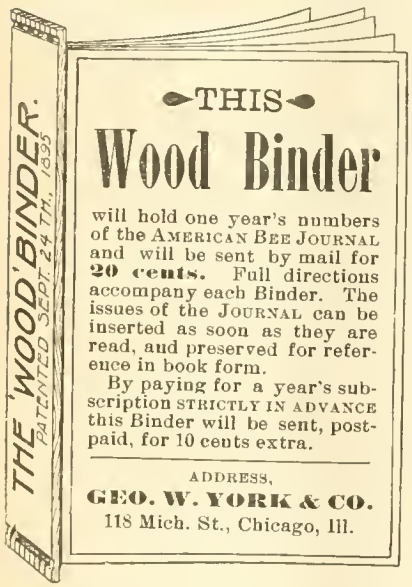
BEES **QUEENS**
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for
FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.
14A1y Please mention the Bee Journal.

M. H. HUNT & SON,
SELL ROOT'S GOODS AT ROOT'S PRICES. Shipping-Cases and Danz. Cartons are what you need to display and ship your honey in. Send for Catalog. BELL BRANCH, MICH.



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Wood Binder

will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

ADDRESS,
GEO. W. YORK & CO.
118 Mich. St., Chicago, Ill.

HONEY.

Buy now before advance in prices.

60-lb. cans Pure Alfalfa Clover ...9½c
Half barrels (300 lbs.) Basswood-Clover 9c
Full barrels (600 lbs.) Pure Amber Honey 7¾c

WM. A. SELSER,
10 Vine Street, PHILADELPHIA, PA.

22nd Year **Dadant's Foundation.** 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

The following dealers handle our Foundation:

G. B. Lewis Co.....Watertown, Wis.
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Portland Seed Co.....Portland, Oregon.
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L. C. Woodman.....Grand Rapids, Mich.
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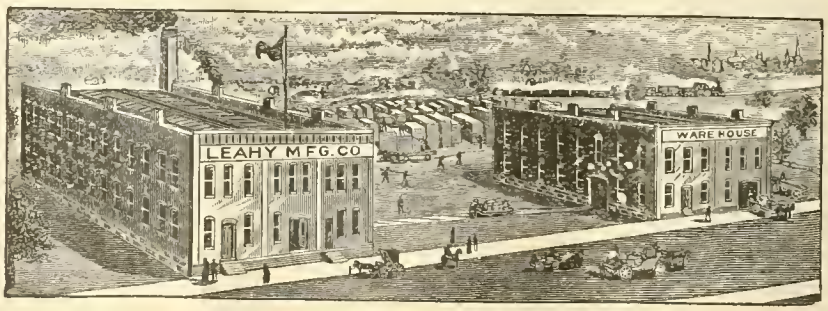
J. Nebel & Son .....High Hill, Mo.
G. W. Fassett.....Middlebury, Vt.
J. W. Bittenbender.....Knoxville, Iowa.
J. L. Gray .....St. Cloud, Minn.
Pierce Seed and Produce Co.....Pueblo, Colo.
F. Foulger & Sons.....Ogden, Utah.
R. H. Schmidt & Co. .....Sheboygan, Wis.
Vickery Bros.....Evansville, Ind.
C. H. W. Weber.....Cincinnati, Ohio.
The L. A. Watkins Merchandise Co., Denver, Colo.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised. The Classic in Bee-Culture—Price, $1.25, by mail.

Beeswax Wanted at all times. CHAS. DADANT & SON,

Please mention Bee Journal when writing. Hamilton, Hancock Co., Ill.



For Apiarian Supplies —Address— **LEAHY MFG. CO.** HIGGINSVILLE, MISSOURI.

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HONEY JARS.

1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

CARTONS.

If you use these, send for a sample before buying.

VEILS.

THE BEST, with silk face, 35 cents each; 5 for $1.50, postpaid. If not satisfactory, you can return.

BASSWOOD EXTRACTED HONEY, in cans, 8¼c pound. Sample 5 cents.

Catalog free. I. J. STRINGHAM,

Please mention Bee Journal when writing. 105 Park Place, NEW YORK, N. Y.

23 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **23** cents a pound—**CASH**—upon its receipt. Now, if you want the money PROMPTLY, send us your Beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., OCTOBER 5, 1899. No. 40.

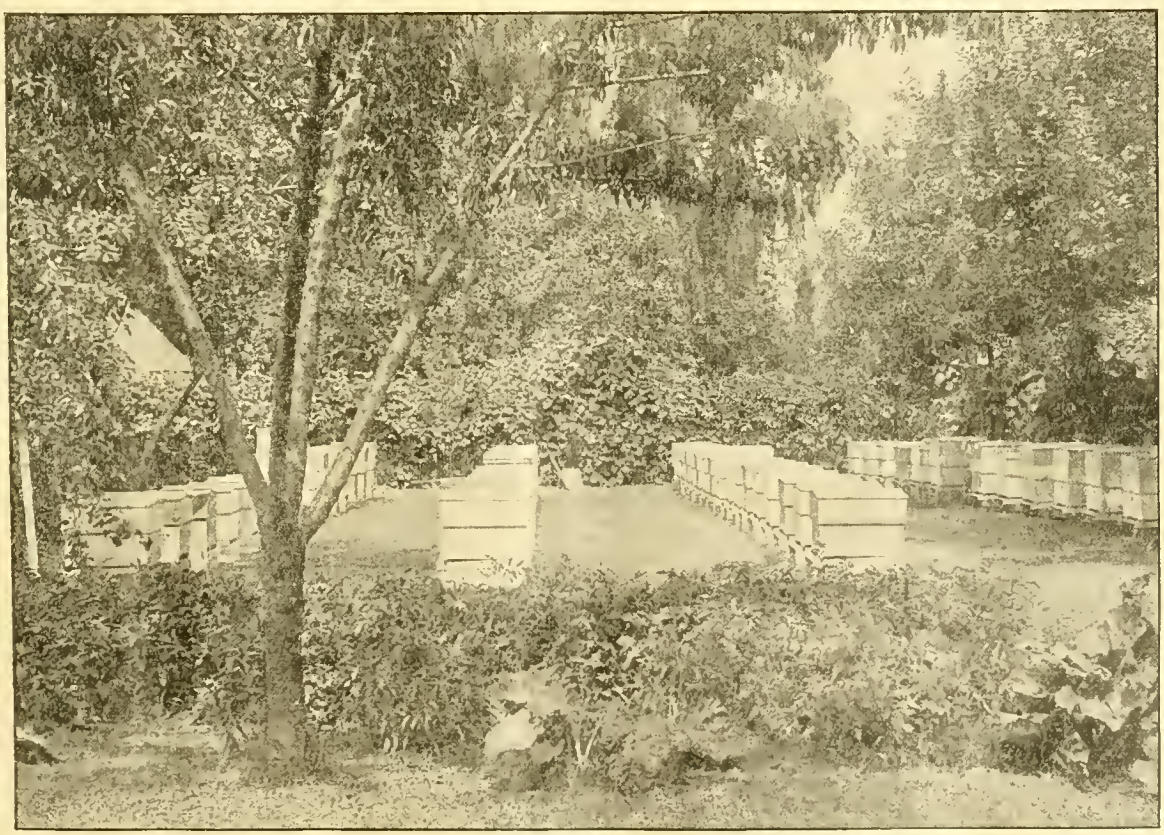
CONTRIBUTED ARTICLES

Apiary of Mr. F. G. Herman, of Bergen Co., N. J.

EDITOR YORK:—This cozy little apiary is located within the limits of a city. There are 60 hives in four rows, all of them full of bees at present, but not full of honey. I am not out of fashion in this year of poor crops. The hives are what is called "light chaff hives;" they are 21 inches apart in the rows.

The apiary is covered with tan bark, which keeps all weeds and grass from growing, and absorbs all the rain, and is perfectly dry one hour after the sun shines upon it.

The fence around the apiary is a wire one, six feet high, and is covered with honey-suckles and grape-vines. When looking at the picture imagine you are facing westward—those tall trees in the background shade the apiary after 3 p.m. which is a pleasant feature to me, as it makes it more comfortable to work among the bees. You will notice in the middle isle a home-made chair; there is where I spend many a pleasant hour, and the bees hum me to sleep. I intended to be in the picture, but while I was getting



Apiary of Mr. F. G. Herman, of Bergen Co., N. J.

things ready for another picture, the photographer snapt this one.

The four years preceding this year I averaged 100 pounds of honey per colony, spring count; but this year it has dropt to about 35 pounds.

Bee-keeping is only a side-issue with me, my daily vocation being "wool finishing;" notwithstanding, with the help of a bicycle I can be my own salesman and market my own crop, and occasionally I have to buy more to tide me over. F. G. HERMAN.

Bergen Co., N. J.

Queen-Excluders—Is their Use Advisable?

BY G. M. DOOLITTLE.

A CORRESPONDENT writes me that a bee-friend of his thinks there is no need of using queen-excluders over the whole top of the hive under the surplus arrangement, but just under the front and back end, putting a thin board under the center, and thus save laying out so much money on queen-excluders. And from what he further writes I judge that he fears that the bees will not work as well over the board as they would were the whole top of the hive covered with the queen-excluding metal. He closes his letter by saying, "Won't you tell us thru the columns of the American Bee Journal what you think in the matter?"

Well, I not only endorse those "fears" of the correspondent, but had he said he knew that bees would not work over the board as well as they would without it, I should have endorst it equally quick. To be sure, I have known bees to go clear around division-boards and up into the cap of the hive, doing quite a business in this way building comb and storing honey there, but from close observation I am satisfied that the more perfect the connection between the brood department and the surplus arrangement the more readily the bees start to work, and the quicker the bees start in the sections the better the results in the number of pounds of honey.

But I think I hear some one say, "If this is so, why do you recommend excluders at all, for the connection between the two departments cannot be as perfect with excluders as without them?" Very probably this is correct, but in reply I would say that it is not the largest number of pounds of honey that is always the most profitable to the apiarist; for if so, why not do as our fathers used to, hive our bees in barrels? Elisha Gallup once said that bees would store as much honey in a barrel or nail-keg as in any of the modern hives, and I have yet to hear any one dispute the assertion. Then why not do it?

Ah! but honey stored in this way is not in marketable shape. And honey stored without queen-excluders, especially where very shallow frames are used, is not always in marketable shape, for thousands of sections have been spoiled for market by having brood in them where excluders were not used. I contend that more honey *in marketable shape* can be secured by the use of separators and excluders than can be without them; and this is just the reason why I use them.

Our correspondent hints that the reason for not using the excluding metal, but a board over the center of the brood-nest, is that the field-bees when returning with their loads of honey do not go up thru the center of the hive, but at the ends. I think this a mistake, for certainly the most of the hives of our fathers allowed them to go up nowhere else, and they secured much surplus in that way, my father taking as much as 75 pounds of comb honey from a single new swarm with a two-inch hole bored in the center of the top of the hive leading to the surplus department as the only means of communication between the two.

Then our correspondent asks further: "If the foregoing is right, does this theory not hold good concerning excluders that stand vertical? I am using large frames, and have much of my honey stored at the sides. Now when the bees march from the entrance toward the excluders do they not move along at the bottom of the hive? and do they not therefore go thru the lower rows of zinc? If I am right in this, how many rows would be needed before I used a thin board from them to the top of the hive?"

It is evident that my correspondent, as well as his bee-friend, is laboring under the delusion so often taught in the past, that the bee which gathers a load from the field must of necessity deposit that load in the surplus receptacles. For this reason outside entrances were made at the top of the hive, to be opened when the harvest came, so the bees could go direct from the fields to the boxes, thus saving them that much of travel and time, for it was too bad to have them traveling and being jostled and rubbed against all the way from the lower entrance up thru the crowded hive in the dark, when they could just as well go right from the field by daylight to the combs where they were to store the honey.

However nice and practical this appeared, the coming of the Italian bee virtually stopt up this upper entrance, for it was soon found that when there were only black bees going in and out at the entrance, just before the Italians commenced to work in the fields, there were very few if any black bees in the sections; and a look thru the glass showed these black laborers giving up their loads of honey to the young Italians upon their return from the fields, allowing these nimble-footed young ones to run up-stairs with the honey, taking the shortest and quickest way they could, whether at the top or bottom, front or back end, or right straight up thru the center.

Moreover, it was ascertained that, unless there was a very large yield of honey, these young ones held this honey in their honey-sacs, or deposited it in the brood-combs right among the brood, wherever an empty cell was found, till it was sufficiently ripened to be stored in the sections or placed permanently in the combs.

It is about time that the average bee-keeper comes to the conclusion that bees have no paths staked out, nor lawns with "Keep Off the Grass" notices posted up so as to guide them in certain directions in which they should go with their loads of pollen and nectar. The natural instinct of the bees is to cluster with and about the brood, and deposit their honey above and around it, and the more they are allowed to conform to this instinct the better will be the results, only we must guide them enough so that their product will be in the most salable form when brought to a completion. Onondaga Co., N. Y.

Description of a Wisconsin Bee-Cellar.

BY WM. M. BARNES.

MY cellar for wintering bees is 16x20 feet, and 6½ feet deep. It has a stone wall one foot thick and 3 feet high, then from where the wall rests the cellar is dug out 3½ feet deep in yellow clay, and is smaller all around by one foot than the inside of the wall, thus leaving an offset of one foot all around the cellar. The sides of the cellar are left sloping, so that there is no danger of the dirt caving off.

There are two outside doors made of matcht pine, being two thicknesses of lumber, with a parting strip of oak one inch thick all around the doors and between the two thicknesses of lumber, thus making a dead-air space in the doors. One door shuts even with the inside of the wall, and swings into the cellar, and the other door swings outward, and is 3 feet from the inside door. The wall at the doors extends down as far as the bottom of the cellar. The opening at the top of the doors and between them is covered with a trap-door, which is covered with galvanized iron. This trap-door can be raised when the other doors are closed, and secured, and the space packt full of straw or planer-shavings, if necessary.

From the outside door there is an entrance-way dug, and in this there is a ventilator 30 feet long, 8x10 inches inside measure, made of 2-inch oak plank. The outside end is wide open; the inside end extending inside of the cellar 3 feet, and the opening is closed with a register.

The upward ventilation is secured by a common 6-inch stove-pipe, the lower end coming down within 4 feet of the bottom of the cellar, the upper end extending thru the roof of the building used for a shop over the cellar, making the pipe 22 feet long, thus causing plenty of draft.

I now have the wall outside graded with dirt to the top of the wall, then 10 inches of old sawdust as banking around the building.

I moved my bees into this cellar Nov. 28, 1898, and kept a thermometer there. Up to Dec. 14 I found that the temperature was 41 degrees above zero—a little too cool, still the bees were quiet, and I thought the temperature might rise as the cellar dried out, as it was quite new. I had 96 colonies in the cellar, and could have put in 50 more without crowding.

I wish the older ones in the bee-business would show me my errors, and where my cellar may fail.

Richland Co., Wis.

Suggestions on Fall Work in the Apiary.

BY F. A. SNELL.

WITH favorable weather a fall crop of honey is generally secured in most sections of our country. With us, the fall honey crop varies much, some years we have a good one, others only a moderate or light crop. The apiarist should make due preparation for a fair honey-flow, and if it comes he is in shape to reap the harvest. This flow varies as to time of opening, some years the bees will, with us, begin storing some the latter part of August.

I aim to have a lot of cases in readiness to put on the hives by the 15th of the month. The unfinisht boxes left over from the summer are all used, either in filling, or partially, each case. In using or about half filling with the built combs from summer, the remaining space is filled with boxes having foundation in each, and the latter are placed at each side of the cases. A few cases should be at first placed on the stronger colonies, and these watcht to see if honey is yet abundant enough for storing surplus, which can be readily seen thru the observation glass. If the yield is sufficient, the combs will be drawn or built out, and honey stored in them. The comb foundation in the side boxes will be built out, and the central combs given such will be pusht toward completion.

I seldom at this time of year give any colony over two cases at one time. When the honey-flow is moderate, one surplus case will suffice. The amount of room given, or rather needed, can be determined by experience, and must be governed by the honey-yield at the time. As the cases are completed they should be removed from the hives so the capping will not be darkened by the bees traveling over them, or coating with propolis or darker wax. The bees should be given new cases if needed, and such all ready to put on should be made ready in advance.

As the fall flow draws to a close, the surplus-room should not at this time be more than one case, for at the close of the summer flow it is desirable to get all the complete combs we can for sale or use.

As the honey in the fields becomes less, the bees are inclined to rob, and no honey should be left exposed, for this reason.

At the close of the fall yield all boxes should be removed from the hives and stored in the honey-room. The fall honey should be kept entirely separate from that secured in summer, and rackt up the same.

The next work of most importance to be done is the sorting and crating of the honey. Two grades of fall honey are generally harvested, and should be crated as such, as a rule. After the honey is all crated it should be marketed as rapidly as one can do so. The honey not sold by Oct. 10 would better be kept warm by artificial heat, so it will not assimilate moisture.

The partially-filled combs should be emptied of honey by means of the honey-extractor, and all boxes and supers cleaned of propolis. The supers should be filled with boxes loosely so bees can pass between them, and on warm days placed out, so that all honey may be gleaned by the bees. Not a drop should remain in the combs. After all have been thus cleaned, they should be stored for winter and next season's use.

All colonies short of honey should be lookt after early in September, and supplied with enough honey to last until spring; nuclei united or used with queenless colonies early in the fall. This kind of work should at all times be done early, if possible.

Where a part of the apiary is run for extracted honey it should also be removed from the hives at the close of the honey-flow, and thrown from the combs, and the supers stored away for the season.

Not later than Oct. 1 every colony should be in good shape for winter. The cappings secured from extracting after draining should be soakt and rinst in water, and the latter put into a barrel to be made into vinegar. The cappings should be made into wax or put away until next summer, if to be made into wax by the solar extractor.

The apiarist who produces considerable honey should see that his home market is at all times well supplied with honey, when he is able to do it. He should also seek customers in all directions, and open up new points for sales of his honey. This requires quite a good deal of time, and is really a part of his fall work. The fall months, like those of summer, are busy ones for the extensive bee-keeper.

The bees to be wintered out-of-doors should be packt during the latter part of October or early in November. The bees to be wintered in the cellar should be made ready to place there early in November, so that when rough weather comes the bees may be promptly put in. It is very desirable that the bees have a good flight just before their removal to the cellar, and as soon as the weather is cooler place them in for winter. This done, and the honey mostly disposed of, the season's work is about completed.

The author, teacher, and most successful honey-producer of his day—Moses Quinby—said, "Bee-keeping means work," and this is as much a fact to-day as when uttered many years ago by Mr. Quinby. No apiarist can do much at the business who will not work earnestly and faithfully. We must work to win. Carroll Co., Ill.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 598.]

The following paper by Mr. W. W. Somerford, at present from Texas, was read next:

Possibilities and Difficulties of Bee-Keeping in Cuba and Porto Rico, and the Effect of Our New Relations With these Islands on Our Honey Market.

Possibilities and difficulties the subjects assigned myself and Mr. Craycraft to discuss—are subjects that we both have had experience in, especially the difficulties. The main one encountered so far is a very serious difficulty, one that but few of Cuba's modern bee-keepers have escaped. So plentiful and so scattered is that terrible difficulty that we have nearly all had a sight and a whiff of it. It is foul brood, scattered broadcast over the land, Cuba's fair and fertile land, "the bee-keepers' paradise," except for foul brood.

The disease is one that some writers seem to think amounts to but little, yet I have known over $100,000 worth of bees to dwindle out of existence from its ravages in Havana Province *alone;* and I still know of hundreds of colonies on the same road to sure and certain death, as none so far have escaped after contamination; and the afflicted ones have been sold and hauled hither and thither until the question is with the knowing ones, Where can I locate and be safe and secure? Where, oh, where? The wisest bee-keeper on the island of Cuba would not dare to answer the question with any certainty or assurance, for, if he did, he might "get left" as the most of us have. Yes, left without bees, with only infected hives and experience as future capital—and books (foul brood books) that tell all about how it can be cured so easily in the hands of the careful and studious; but, then, I have known men of culture, educated in the languages, graduates of our best universities, *all to fail.* Even common, practical men fail; men who have given the better part of their lives to bee-keeping fail. Fail when it comes to curing foul brood, where there is eternal sunshine and summer and big apiaries. All have failed so far in Cuba to cure the disease; and I consider it the only great "difficulty" that a bee-keeper has to contend with, or may have to encounter.

Mr. Craycraft wrote me a few days ago that the leading bee-keepers of the island had a move on foot, and were whooping it up, to establish a foul brood law, with an inspector to inspect and condemn all infected apiaries. The "leading bee-keepers," I will add, that are in the move, are the ones that foul brood has led out of the business. So the law, if past, is sure to be effectual, as I understand one of their number is to be inspector, and will pass the death sentence where the disease is found. Then, Mr. Craycraft says, a bee-keeper can keep bees with a certainty of success, but not until then.

As to possibilities, they are great when it comes to bee-keeping and honey-producing in Cuba. It will take time to tell the story as to what can be accomplisht. I knew a bee-keeper to claim 40,000 pounds of fine white honey from 100

colonies in a single season, and I am sure better reports will come in the future under our new relations, for Cuba is surely a honey country. I, myself, took, in 90 days, from an even 100 colonies, over 2,000 gallons of the finest honey I have ever seen. But where is that 100 colonies now? And still another 150 that I used to have in Cuba? All dead. Yes, *dead*. Doctored to death with foul-brood cures—cures that *would not* cure in Cuba. But I will try it again. I will embark for Cuba in September, as big apiaries under sheds are fascinating to me—until contaminated with Cuba's contagious "difficulty," foul brood, or "bacillus alvei," as Prof. Cheshire, England's great scientist, called it.

As to Porto Rico, I have not been there yet, but my friends who have, say it is no such a honey country as Cuba; but, of course, it may be better; I do not know.

"The effect of our new relations with these islands on our honey market"—they will have but little, if any, effect for years to come, and if they do it will be to create a market for fine honey, in many places where none is produced, and but little consumed *at present*, as is the case in many parts of the South, where the quality of honey *is bad*, and the crop uncertain, and consumption amounts to nothing. In such places thousands of tons of Cuba's fine honey could find a market. But for European buyers, it is not likely that much honey will come into our American markets from Cuba, as her market is already establisht in Europe, and has been for more than a century.

W. W. SOMERFORD.

The above paper was then discust as follows:

Mr. Selser—I notice that the people who talk about the market do so to mock us.

Harry S. Howe—I am going to be down there soon, and shall learn what there is to learn.

S. A. Niver—I, too, want to take issue with Mr. Selser. I have had little experience, and I have compared the honey-dew with good honey. Come to York State and see how we do things there.

Dr. Miller—Mr. Selser is nowhere when New York gets after him.

The next paper was read by Mr. W. Z. Hutchinson, of Michigan, on

Bee-Keeping as a Profession.

The time was when many industries were represented in one family. Flax and wool were grown, spun and workt up into cloth and made into clothing. Cows were kept, and cheese as well as butter made for home use. Poultry and a few colonies of bees added to the comforts of the household. But there is no need of going into detail; every one knows how people lived 100 years ago. Cheap and rapid transportation has encouraged the invention of machinery, the building of factories, and the classification of labor. This has brought about *specialty*. No one disputes that this condition of things is better; by it our comforts are more than trebled.

Some industries brancht out as specialties much sooner than others. Bee-keeping was among the later ones. At last, however, it has been recognized as an industry of itself. How does it compare with other professions? What are its advantages and disadvantages? Can it be depended upon as a means of livelihood? These are questions that have come to all of us, and will continue to come to all who enter our ranks.

I believe it is well understood that bee-keeping is not an occupation in which we can easily become wealthy. In the very nature of things it cannot be otherwise. Like the keeping of poultry, the raising of small fruits, gardening, and other minor branches of agriculture, the keeping of bees in localities adapted to the business can be depended upon to furnish their owner a comfortable living; but such fortunes as are amast in merchandising and manufacturing can never be hoped for by the bee-keeper.

Fortunately, however, the perfection of a man's happiness bears but little relation to the size of his fortune. Many a man with the hum of bees over his head, finds happiness sweeter and deeper than ever comes to the merchant prince with his cares and his thousands. Bee-keeping is an ennobling pursuit. It keeps a man close to Nature's heart. It brings out the best that is in him. But can it be depended upon, year after year, as a means of supporting one's family? In some localities it can; in others it cannot. Where there is only one source of honey, and that an unreliable one, a man learns, sooner or later, that he cannot depend upon bees alone.

If a man is to adopt bee-keeping as a profession he must choose a location possessing at least one unfailing source of honey, or else several sources, some one or more of which will be quite likely to furnish a crop.

Many who attempt bee-keeping as a specialty, are lacking in business methods. They attempt too many makeshifts in the way of hives, implements, buildings, and the like. To become a successful professional bee-keeper a man must first find a proper locality, as I have just explained, then he must secure the best stock procurable, put up suitable buildings, wintering cellars, if necessary; have the best of hives and implements, and *keep a large number of colonies*. I think many fail in this point. They keep only bees enough to bring in an income during a good year, or, possibly in an average year, and when one poor year follows another, two or three times in succession, want stares them in the face. Keep bees enough so that when there is a good year or two, enough money may be made to tide over the poor seasons that are sure to come. The very fact that the bees are scattered about in out-apiaries, several miles apart, adds to the certainty of a crop; as one locality often yields a fair crop while another a few miles away yields nothing.

With a man adapted to the business, a suitable locality, and the adoption of sound business methods, bee-keeping will compare favorably with other rural pursuits.

Believing that the mission of a paper is best fulfilled when it introduces the subject, rather than exhausts it, I bring mine to a close. W. Z. HUTCHINSON.

Mr. Doolittle—I don't like to see time run to waste, neither do I want to oppose anything that so intelligent a brain as Mr. Hutchinson's has brought forth. He told us how agriculture, in many branches, has ceast, and the masses are not happier. Mr. Hutchinson, I want to say this, and enforce it by telling a story. One of those long-faced brethren was riding one day, and came across a young man walking, and askt him to ride. Presently they entered a deep wood; he thought he was called upon to speak to the young man about his soul, so he askt him the question, "Are you prepared to die?" and the young man jumpt out and ran away. Now, I want to say to you, that anything that kills our happiness is wrong.

Mr. Hutchinson—What is your point, Mr. Doolittle?

Mr. Doolittle—The point is, that no people are happier than when working for a home. And this speculation that our people have gone into has spoiled our homes. A hungry dog cannot fight. You may run up a flag, but you cannot force people to respect it.

Mr. Hutchinson—When I first went to my present home, we kept a cow, had a garden, etc., but the work in the garden came at the same time as the work in the apiary, so I laid by the cow and the garden.

Dr. Mason—Mr. Doolittle says a poor, hungry dog can't fight, so he must mean that the dog that is well fed and sleek can fight the best. Now, that is all right, and I agree with him. (Several—"If not *too* fat.") But what makes that dog poor? Is it not his own fault? In our locality (and you know localities differ), there are too many who have not the backbone, or the principle, to make use of the means at their command, to make home happy, and blame the more fortunate for their success.

W. E. Flower—This reminds me of a story of an Irishman. He and his wife quarreled. She said to him, "Look at the dog and cat. Did you ever see anything more peaceable than that?" The husband paused and lookt at the creatures, then said, "Jist tie them together tight, and, faith, I think then they'll fight." Taxes are so high I do not want a home. If I am going to spend all my income for taxes, I am better off without a home.

Dr. Miller—The question is a serious one. If a young man should ask me to-day if bee-keeping is a profression that pays, I would not dare to say it is as safe as a profession as it was 20 or 40 years ago. I think Mr. Hutchinson was very wise in putting it that way, that it is not a matter of dollars and cents. Perhaps I may rest and strengthen up while following this profession; I am a bee-keeper, and I find time to go fishing. We get our pleasure as we go along in our occupation. I am enjoying my bee-keeping. That is my vocation, and I believe I can enjoy it as a profession.

Rev. E. T. Abbott—You have gotton on my hobby. This talk about bee-keeping as a specialty all sounds very well, but I don't think there is a man in the room that makes his living out of bee-keeping. There is something else combined with it.

Mr. Doolittle—I do.

Rev. Abbott—Where is your farm?

Mr. Doolittle—Bees bought it.

Mr. Abbott—Do you have no income from the farm? Bee-keeping has only one mission in the United States, and that is to make the home happier and better. Mr. Hutchinson and I have to sell papers, and it is a fact that bee-keeping will not succeed as a profession in half a dozen States. But for broken down doctors, and preachers that never *could* preach, it is a splendid thing. When we talk about a living, we would better keep still.

Mr. Doolittle—You will excuse a little personal story. I was brought up a farmer. My father thought so much of me that he wanted to keep me with him. If there is any young man present, let me say to you, don't be fool enough to do it. I bought my father off. I earned $600 working out, for I saw that I could barely make a living from the farm. I bought some bee-papers; I was up in my loft and I overheard father talking to a neighbor, and father said, "I hoped Gilbert would be a farmer. I have even prayed that he would fail in bee-keeping." The bees have bought everything that I have. They bought my home, and Mr. Abbott cannot drop it out, for it is there.

An Attendant—I do not own a foot of land, but I have some bees. The gentleman said that the place to keep bees is on the farm.

Mr. Doolittle—There are some great facts before us, and it is well to understand them. In 1877, as a friend of mine and I went to New York with some honey I told him that we were getting some cheap rides at six cents per mile. As we went to Canada afterward, I said, cheap riding at two cents per mile. But how did you get your money? With honey at 9½ cents per pound; and I measured that I was paying six cents per mile in Canada, and I figured that I was paying nine cents per mile in 1877. The little a man got 20 years ago is two-thirds less now.

Dr. Miller—I want to ask you, Mr. Doolittle, if your bees have averaged as much in the last 10 years as in other years?

Mr. Doolittle—Yes. In the first year of my bee-keeping life I secured 66½ pounds of honey per colony. I don't know as I shall ever see it again. This year was a poor year, but my bees averaged 135 pounds per colony.

After a song by Mr. Haenle, which was encored, the convention adjourned until 9 am. the next day, Sept. 6.

[Continued next week.]

Report of the Central Texas Bee-Keepers' Convention, Held at Milano, July 20-21, 1899.

BY LOUIS SCHOLL, SEC.

[Continued from page 615.]

FIRST DAY—EVENING SESSION.

The meeting was called to order at 8:30 p.m., and on motion O. P. Hyde was appointed a committee on program for the next meeting.

BEST RACE OF BEES.

"What is the best race of bees for each and every bee-keeper to use for all purposes?"

A. C. Brown gave his experience with Italians and hybrids. The Holy-Land bees he found to be very gentle instead of being stingers. The queens filled the frames full of brood, and they gathered large crops of honey. He prefers the Holy-Lands, if they are like those he had.

B. A. Guess prefers Italians, as they have done well with him.

Mr. Raven started with blacks, then hybridized, and prefers them.

Mr. Atchley says that for all purposes the Italians; for many purposes, the Holy-Lands; for many things, others. He has handled Italians for 25 years, and prefers them for all purposes.

O. P. Hyde had experience with blacks and Italians, which have some features he does not like. The Holy-Lands are better, and don't fill the brood-nest with honey like Italians, which crowd out the queen. Holy-Lands work better in supers. For all purposes he prefers the Italians.

J. B. Salyer—Pure Italians—goldens.

Jno. Pharr says a third cross between golden and Holy-Land is the best honey-gatherer in this country.

G. F. Davidson finds the goldens most beautiful, both for pleasure and business. He wants no hybrids and blacks, and has had no experience with Holy-Land and Carniolan bees.

Judge Terral defended the old three-banded Italian for all around purposes. For gentleness they are the best bees, and if they do crowd out the queen in the brood-chamber it is all the bee-keeper's fault for not attending to his business to extract from the brood-chamber to provide room. Hybrids follow him around all day; also the Carniolans, and they are the worst to rob. He has had trouble with neighbors on account of their robbing. Carniolans are no better than the common German, and worse to sting. He can't handle them without smoking and smoking them. The Holy-Lands are worse than all, and fight him every time he goes into the yard. Then his bee-yard grew up in grass, weeds and horsemint, several feet high, and every time he went into the yard it went *zzip*, *zzip*, and there would be a big rattlesnake right before him. "Yes, sir! give me the straight, old three-banded Italian. It's the best all around bee for America."

Pres. Jones askt the Judge how much experience he had with Carniolans.

The Judge somewhat hesitatingly said that it was a long time ago, and he believed that they might have been Carniolans.

H. H. Hyde said there is a difference between golden Italians and Holy-Lands. He likes a direct cross between a Holy-Land queen and a golden drone for honey-gatherers.

F. L. Aten strongly defended the hybrids; as he is not keeping bees for pleasure he has to depend upon them. Hybrids hunt honey all the time, while Italians lie around doing nothing. The Holy-Lands are not so good. Hybrids are the all-purpose bee, and build nicer combs than any other bees.

Mr. Atchley said that really we were not discussing the right subject. When moving bees lately he placed Holy-Land, Italian, golden, Carniolan, and other colonies about in one yard, and at the end of the honey season the Holy-Lands had about 25 pounds more honey to the colony. The Holy-Lands are the bee for quick work and storing honey. But for all purposes and everybody he recommends the three-banded Italians.

Pres. Jones said it was a hard thing to answer this question. The three-banded Italians are good. Some prefer hybrids, and he thinks he would like a hybrid himself. Carniolans and Italians are the most gentle, and also good in other qualities.

Messrs. Madeley, Guess and others gave their experience with hybrids, while others did not know.

FOUNDATION IN THE BROOD-CHAMBER.

"Shall we use foundation in the brood-chamber, and how much?"

H. H. Hyde and Mr. Salyer said full sheets all the time. Under all conditions the best results are with full sheets.

Judge Terral—Full sheets during the honey flow; slow flow not.

Mr. Aten said full sheets when he uses it.

Mr. Atchley says it is money thrown away during a slow flow; in a fast flow he wants full sheets. It pays to use full sheets for swarms during a fast flow, as they need storage-room. They will build two-thirds drone-comb with an old queen without full sheets.

Mr. Davidson uses full sheets during a fast flow to prevent large quantities of drone-comb; no advantages of full sheets in sections; but best when wiring frames.

O. P. Hyde advocates full sheets for both brood-frames and sections; also for both fast and slow flow, and wired frames. Bees build all worker-comb with full sheets.

Pres. Jones said that in some times and some instances full sheets are perfectly useless; in other instances bees built out full sheets during the slowest flow. He never uses full sheets for swarms when run for comb honey, as bees store all the honey below, which he wants in the sections above. Therefore, he uses starters in the brood-frames of swarms; only circumstances differ.

The convention then adjourned till 8 a.m. the next day.

SECOND DAY—FORENOON SESSION.

The convention was again called to order at 8 a.m., and the following question taken up:

USING FOUNDATION IN THE SECTION.

"Shall we use starters or full sheets of foundation in sections?"

Mr. Salyer—Yes.

F. J. R. Davenport—It depends upon circumstances.

Mr. Guess uses full sheets or none. No complaints from customers.

Mr. Atchley—No.

A. C. Brown—Full sheets sometimes. Bait sections are best to get bees up into the supers.

FASTENING FOUNDATION IN SECTIONS.

"Best method of fastening foundation in sections."

Pres. Jones spoke on the subject. He told about a fastener he made himself, which was better than the Daisy, as the latter did not do neat work; while the heating plate of his machine slants to the front, causing the melted wax to run into the section, that of the Daisy causes the wax to run to the back, over the lamp and everything. He has objections to those already on the market.

Mr. Scholl was requested to show the workings of his foundation fastener, which was generally endorst.

GETTING SECTIONS WELL FILLED.

"How can we get section honey well filled all around?"

Mr. Scholl—Use the Hyde-Scholl separators, and see.

H. H. Hyde, E. J. Atchley and others advised using the Hyde-Scholl separators and full sheets of foundation.

O. P. Hyde—There are four things necessary: 1st, an overflowing colony of bees; 2nd, a good honey-flow; 3rd, full sheets of foundation; 4th, Hyde-Scholl separator.

BEE-PARALYSIS.

"Bee-paralysis; can it be cured? If so, how?"

Messrs. Davenport, Atchley, the Hydes and others said they didn't know.

Mr. Brown's experience was given. He described the bees with the disease. They lookt sleek and shiny, and swelled up; trembled all over, and were generally carried out by their comrades; used salt and water in barrels where bees got to it—about one tablespoonful of salt to a bucket of water. The first year he did not see any difference, but the second year it disappeared. He did not know exactly whether this cured it, or whether it was something else.

Mr. Davidson had but little experience with it. Diseased bees are sleek and shiny. Don't mistake robber-bees for them, as the diseased bees are swelled up, and tremble; otherwise they look shiny, like robbers.

Mr. Davenport gave his father's experience. Remedy: One-half honey and one-half sugar, boil and strain. Feed to the bees after night. The disease disappeared.

Pres. Jones had several cases, and tried the following solution, applied with an atomizer; thoroly saturated all parts of the hive and combs, and the third day the bees started to work again and gathered a good crop:

Sulpho calcine ½ ounce, salt 2 ounces, dissolved in one pint of water; add one pound of extracted honey. Mix thoroly and apply. Remove the diseased colony a few feet, put a new clean hive in its place, and put the combs back into it.

The next year he weakened the solution, and on the fifth day there were still signs of paralysis. After a week it was gone, and the bees commenced work.

Mr. Brown tried some experiments to see how contagious it was. He hived swarms with colonies having the disease after the bees all hatcht, and there was no more paralysis after that.

Mr. Atchley said that he, long ago, with Dr. Howard, made several microscopic observations, and found that certain food taken by the bees, without having cleansing flights, caused them to get a fever, which they then called "bee-fever."

[Concluded next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

What Causes the Brood to Die?

In examining the bees in this county, I find in some places about one-half the sealed brood is dead. No one here seems to know the cause or any remedy for it. Unless it can in some way be checkt, it will ruin the bee-industry, I think. It is entirely unlike foul brood. The unhatcht dead bees are fully-developt in size and all their parts, but die before hatching, turn a dark color, and dry up in the cell. In view of the fact that most of the bees here have been in-bred for years, and no new blood from any source introduced, I have been inclined to believe it might be caused by in-breeding. COLORADO.

ANSWER.—Continued in-breeding for years might result in a weakening of constitution, making the bees succumb more readily to any disease, but such a wholesale and sudden weakening as to make half the brood die in the cell would not be likely to occur. It might be a good plan to send a sample of the brood to Dr. Howard or Mr. McEvoy.

Very Likely Caused by Worms.

What is the matter with my bees? For a long time they have been bringing out dead brood from the hive, in the nymph stage, and also full-grown bees. Indeed, frequently the bees brought out are alive, but when alive they always have a thin membrane attacht to them on various parts of their bodies. I have examined the frames, but see no signs of worms. The colonies are greatly weakened in consequence of the brood dying. ILLINOIS.

ANSWER.—In spite of your seeing no signs of worms, it is possible that they are the culprits. If you take out a comb and examine it, you may see no silken gallery such as are commonly made by wax-worms, indeed no sign whatever of the presence of worms, unless it be that here and there some fully mature young bees seem to be struggling to get out of the cells, apparently fast there. Pull out these wriggling bees and you will find at the bottom of the cell a lively, slender worm about half an inch long. I think it is different from the usual wax-worm.

Combs of Pollen—Wood-Bound Zincs.

On examining a 10-frame colony I find in the brood-chamber no eggs or larvæ; in most of the combs a majority of the cells are filled from one-third to two-thirds full of pollen, except a strip at the top, or a patch in one corner, which contains old capt honey. I find no evidence of young bees, either. On top of this hive is a full-depth extracting-super containing 10 frames of honey. During the basswood flow the bees filled with honey the upper portion of these super-combs, which they drew out from full sheets of foundation; the balance of the combs with brood. Some four weeks since examination disclosed this brood where I supposed there was honey. My hives having no honey-boards on, I then procured some Tinker zincs, wood-bound, and placed them over the brood-chambers, shaking and brushing all bees below that were in the supers. In the meantime all this brood has hatcht and bees are filling the cells thus vacated with honey, but storing none in the brood-chamber.

What is true regarding brood in the super of this colony is true of nearly all my colonies. But since I placed the zincs over them many colonies seem greatly hampered about getting into the supers. The wood-bound zincs are not made right. On one side the frame is elevated above

the zinc, on the other side not; so whichever side I place uppermost, the bees, between many frames, are partially or wholly prevented either from getting out of the brood-chamber or into the super.

1. What should be done with the combs of pollen? I have other colonies in much the same condition—or they were when queenless, and now that they have queens the pollen remains. There is little room left for the queen to deposit eggs, and if honey is stored over the pollen I fear the combs will not hold enough for winter. Can the bees be made to clean out this pollen? and how?

2. Is there any supply manufacturer who makes a wood-bound honey-board with two rows of holes between the slats, like the Tinker zinc, and raises the frame on both sides? If so, who? It is a disappointment and a nuisance to buy supplies and have them practically valueless.

NOVICE.

ANSWERS.—1. If I understand the matter rightly, you have a two-story hive, the "full-depth extracting-super" on top having frames the same size as those below. The queen having gone into the upper story, the bees made that the brood-chamber, only they dumpt the main portion of the pollen in the lower story. Either story might be used as the brood-chamber, only if you use the lower one there is more pollen than is needed, and if you use the upper one there is perhaps a scarcity of that article. You can even up matters by taking part of the combs of honey from the upper story and putting them in the lower story, where the queen now is, and putting some of the pollen-laden combs from below in the upper story. Possibly there is no more pollen in the hive than the bees will want to use before another honey harvest, and next spring it may be a good thing to put back in the brood-chamber the pollen that you now remove. Indeed, if you put it in the upper story next spring, you will find it gradually disappear from there, altho it may be better for you to put it in the brood-nest. Bees use a very large quantity of pollen for brood-rearing in spring. The use of a queen-excluder will prevent the same thing from happening again to some extent, but there will still be an accumulation of pollen if the colony is queenless, the plain remedy being to keep the colony supplied with a queen.

2. It is hardly likely that any manufacturer keeps in stock queen-excluders with a bee-space on both sides, but any of them would probably make them to order. I cannot understand what kind of an arrangement you have that makes it desirable to have a bee-space on both sides of the excluder. The only thing I can think of is that either there is no space between your upper and lower stories, or that there is a half-space at the top of the lower story and a half-space at the bottom of the upper story. In most cases there is a full bee-space at the upper part of the lower story, and none at the bottom of the upper story. Then when the excluder is put on with the bee-space uppermost, there is a bee-space between the excluder and either story. You can nail little strips on the top of the brood-chamber, so as to make the proper bee-space there.

Questions on Sweet Clover in Georgia.

I am thinking of sowing some sweet clover seed for bee-pasturage, and want some information along that line. When would be the best time to sow in our latitude, this being about the 33°?

How much seed per acre on common land that has been resting a year or two? and would it be better sown in drills or broadcast? Is it best sown in the fall, or spring? Do you think it will do well in middle Georgia? How tall do you think it will grow here? How much honey do you think it will produce to the acre in our latitude? How much hay to the acre do you think it would make? When would be the best time to cut it? GEORGIA.

ANSWER.—I cannot answer your questions with any degree of positiveness, and shall be glad to be corrected by any Southern bee-keeper of experience with sweet clover. In some parts of the South it has been reported that sweet clover does not flourish, but in most places I think it does, especially in soils where lime is present. Thirty to 60 pounds of seed may be sown to the acre any time from the ripening of the seed this fall to the time when other clovers are sown in spring, success being better assured in the North, and perhaps as well in the South, if the ground is packt hard, as by tramping with stock. In your climate it is likely that there is little or no choice between drill and broadcast sowing. It will grow all the way from four to seven feet high, making from a half more to double as much hay as red clover. Just how much honey an acre of sweet clover will yield has never been ascertained, and not even a guess has been offered. Please remember now that I don't know anything positively about sweet clover in Georgia, and I trust some good Georgian will set right anything in which I may be wrong.

Honey from Colonies that Died.

1. I had a very fine looking queen in a colony that wintered, and a little over half the brood would be workers in the spring, and the remainder were drones in worker-cells; then nearly half would die, some before others, after being capt, and after remaining a while a small hole would come in the capping. But there was no odor from dead brood, nor was it ropy. I killed the queen and introduced another, leaving all their comb except one sheet that was quite full of dead brood, and they have built up to a nice colony, no more disease showing till this fall. A full colony that stored two supers of honey got in the same fix, and as there was but little coming in I preferred it to die rather than have robbing commenced. There was plenty of honey in each hive, so I conclude it was not not pickled brood.

2. Will the combs convey the disease to the next colonies that I give them, as there is considerable honey left in the last one? VIRGINIA.

ANSWER.—While there might no harm come from feeding that honey to other bees, it may be wise to take no risk whatever. If the honey is nice, the safer plan will be to use it on the table, melting it up if that is preferred.

How Queens are Superseded.

When bees supersede their queen do they kill her, do they drive her out, or do the young queens kill her? I found an old queen and 50 or 100 bees in the grass four or five rods from any hive; the queen was an old yellow Italian that I got last year. I put them into a hive till morning. It was in the evening, about five o'clock, and they were all gone the next morning. That colony sent out a second swarm with a young queen. She had led out a first swarm six or eight weeks before. IOWA.

ANSWER.—In some cases, at least, it seems that neither the bees nor the young queen kill the old one. Sometimes an old queen will continue to lay for some time after a royal daughter begins to lay, and in such case I've tried putting the old queen in a separate hive, but generally she disappears in a short time, and in at least one case this summer the old queen seemed bent on getting away from the bees and leaving the hive. I don't know, but I have just a little doubt whether the young queen or the workers ever kill the queen that is superseded.

The queen that you found in the grass with a cluster of bees had probably left the hive with a full swarm; the queen for some reason being unable to fly, had crawled some distance from the hive, and a few of the bees had found her, the rest returning to the hive.

Preparing a Winter-Case for Bees.

I have no cellar to winter my bees in, and would like to winter more successfully than last winter. I have a number of old 10-frame Langstroth hives which I will discard, and use the 8-frame dovetailed hive instead. I also have a lot of cheap box-lumber. Now, I am thinking of taking the upper stories of the Langstroth hives and make them enough higher with this cheap lumber to take in a dovetailed hive with super on. I will also put a bottom to this outside case, on the inside of which I will nail 1-inch strips for the dovetailed hive to stand on, the same as it stands on the strips on its own bottom-board; then set the hive in the case, pack with a chaff cushion on the frames, then pack the empty space around the hive with chaff and over all place the old Langstroth cover. Of course, providing a place of entrance below. In your opinion, how will such a "trap" work for a winter-case? HOOSIER.

ANSWER.—If the upper story of your old hive is long enough to take in the length of a dovetail hive, the plan may answer very well. You are not likely, however, to have another so severe a winter during an ordinary life-time, and it might be well to try side by side at least one or two in the old way, and then compare results. It may be well to remark, in passing, that your chances for successful out-door wintering will not be increast by changing from 10 to 8-frame hives.

GEORGE W. YORK, Editor.

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Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Bee-Keepers Injuring the Honey Market.—A honey-dealer here recently called on several of the large retail grocers in the heart of the city with a sample case of very fine comb honey, expecting of course that he could make a sale of a ton or two, as these particular grocers usually buy in fairly large lots. His comb honey was really fancy, and worth 15 cents a pound if it was worth a cent. But imagine his surprise to learn that some bee-keepers from the country had just been in and sold their honey to these grocers at 12½ cents a pound!

Now, this is only a fair sample of the manner in which some of the honey-producers themselves injure the honey market. It must be that they do not read the bee-papers or see the honey market quotations, else they would not be so foolish as to offer their honey for less than it is worth. Fancy comb honey should bring a good price this year—in fact, honey of all kinds *is* bringing a good price. So there is no excuse for any bee-keeper offering his honey for less than it is worth.

Advanced Prices. Supply manufacturers are marking up their price-lists—a step no doubt made necessary by the advanced prices they have to pay, lumber continuing to rise in price with no certainty where the end will be. Bee-keepers can stand this very well if they have a corresponding advance in the price of honey, and there is no little muttering because the quotations for honey are not higher.

There seems, however, to be a failnre to notice that honey *has* advanced in price. A comparison of present prices with those of a year ago will show that at least in several of the markets there has been an advance of from one to three cents a pound. On the other hand, bee-keepers may with good show of reason complain that all things considered honey is quoted lower than it should be. From all accounts there has been a smaller crop than has been known for many years. This alone should call for a rise in price if prices on all other articles should remain stationary. The general advance on all articles that bee-keepers have to buy, whether in their business or for the support of their families, is sufficient reason for a sharp advance if there was an average crop in the country.

Now put together the short crop of honey and the general advance in prices, and it is not unnatural that a double advance should be considered the right thing.

Shipping Bees by Freight in less than carload lots we believe can be secured soon if bee-keepers will interest themselves sufficiently in the subject. The Western Classification Committee will hold its next meeting in Milwaukee, Nov. 7. A petition requesting the rating on bees by freight in less than car lots has been presented to Mr. J. T. Ripley, the chairman of the committee. Now, bee-keepers should follow up this petition by letters urging that it be granted. Address Mr. J. T. Ripley, Chairman Western Classification Committee, Room 604, Great Northern Building, Chicago, Ill.

There is no good reason why bees in hives should not be sent by local freight just the same as live poultry or any other small stock. All that is necessary is to have the bees securely enclosed so that none may escape from the hive or box containing them. If small or large shipments of bees could be made as desired by freight, instead of by expensive express, no doubt many apiaries would be moved from one locality to another to catch a succession of honey-flows.

Apis Dorsata was discust in convention by Australian bee-keepers. H. L. Jones read a paper moderately favoring their introduction. Mr. Pender thought they might be valuable for wax-production. Mr. Bradley said he had lived long years in India, and the man who would bring them into Australia should be prosecuted. They were migratory, as bad as wasps, with stronger colonies. Mr. Abram told of a gentleman who had gone to expense and travel and then decided to let them alone. Mr. Jones said a gentleman in Singapore was trying to domesticate them.

It begins to look as if a good deal of time and valuable space had been taken up in talking and writing about Apis dorsata. The Italian bee will likely "hold the fort" for some time yet.

Saltpetered Rags for Smoker-Fuel.—Dr. Miller says in Gleanings in Bee-Culture: "I don't know of any way in which a bee-keeper can get more comfort out of ten cents than to spend it for a pound of saltpeter, put that in two or three quarts of water, wring rags out of it, dry them, and cut them up into pieces of 20 to 50 square inches, to be tied up into little rolls to start his smoker."

Rival Bee-Paper Editors is a subject touchd on as follows by Editor E. R. Root in Gleanings in Bee-Culture:

If there ever was a fraternity of feeling among rival editors and publishers, it is among those connected with bee-journals. Once or twice Bro. York and I have occupied the same sleeper *en route* to conventions, and we were together much of the time afterward. This was particularly so in going to and from the Lincoln meeting. Well, this time Mr. W. Z. Hutchinson, of the Bee-Keepers' Review, and I arranged to meet in Cleveland, there to take a sleeper on to Philadelphia. We left Cleveland on the night train

via the Pennsylvania route; and, didn't we talk bees, things and men! The subject of amateur photography we just reveled in. We not only went to the convention together, but we came back together; and on arriving at Cleveland Mr. Hutchinson took the train with me for Medina, where he spent with us a little over a day in looking over the bees, visiting Vernon Burt, etc. All this may seem sentimental to some; but it means much to bee-keepers as a whole. If the editors of the leading bee-journals were clashing and pulling against each other, what would the result be?

On account of the great dissimilarity in the bee-papers of this country, there is scarcely any rivalry among them. It doubtless would pay every bee-keeper to take all of them, and at least two or three of the best.

There can be no good reason why bee-paper editors who do what is right should not be on friendly terms. We count the majority of them among our warmest friends, and do not hesitate to commend them and their papers whenever we feel it is deserved, and without expecting any reciprocation on their part. As a wise man once said, we expect to travel this way but once, and desire to do all the good we can as we pass along. Life is too short to spend it mainly in berating others, no matter how richly they may deserve it; and there is too much of real value to be publisht in the bee-papers to allow the space to be wasted in quarrels among those who should be friends.

Speaking Kind Words.—Dr. A. B. Mason, in the Bee-Keepers' Review, touches on this subject in these words:

"I really pity the man or woman that has neither the inclination nor the ability to say good things of others while they live, not waiting till they are dead. It has been a source of real enjoyment to me to read the kind words said of each other by the editors of our bee-journals. I believe there are very few people who do not like to be well spoken of. The truthful words, kindly spoken of each other, encourage to better efforts and better living..... May this new era continue to exist, and its influence widen till it covers the whole earth."

As bee-keepers have so much to do with sweetness, they of all people would naturally be expected to use "honeyed" words. Tho the bee is a worker in sweets, still it has a sting—but to be used only in defense. There are bees, too, that some people say have had their desire to sting bred out of them, making them non-stinging. We presume people might be so bred, also—brought up to use kind, pleasant words. It will pay to cultivate this characteristic, and thus help to continue the "new era" to which Dr. Mason refers.

New Edition of A B C of Bee-Culture.—We have received a copy of the new (1899) edition of "A B C of Bee-Culture," by A. I. Root, and just revised by Ernest R. Root. It is indeed a fine work, very interesting descriptions of which have been given on pages 603, 619, and on page 635 of this number of the Bee Journal. It is a book that every bee-keeper should own, and read thoroly. The regular post-paid price is $1.20, but to all our subscribers who pay any arrears that may be due, and also $1.00 for the Bee Journal for 1900 (next year), we will mail a copy of A B C of Bee-Culture for only 75 cents, provided the order is received *before* January 1, next. We make this same offer to all who have paid their subscriptions to the end of 1899 send us $1.75 and we will mail you the book and credit your subscription for 1900. We make the same offers on "Langstroth on the Honey-Bee," revised by Dadant (1899 edition).

Crimson Clover is thus written about in a recent bulletin issued by the Department of Agriculture at Washington:

The use of crimson clover (*Trifolium incarnatum*) has increast to such an extent that it is now a standard crop in many parts of the Southern and Middle States. It is distinguisht by its long head of brilliant scarlet blossoms and by the great depth to which its roots make their way. Wherever the winters are not too severe it thrives and is a valuable plant for soiling or for hay. It is a winter annual, the seed being sown any time from the middle of July to late fall in the Southern States. It grows thruout the milder weather in winter, and quickly makes a dense cover to the ground in the spring. This can be pastured, cut for hay, or turned under for green manure, or all three, depending upon conditions.

The seed of crimson clover is larger than that of red or mammoth clover, and is almost perfectly oval in shape. The fresh seed is of a bright reddish-yellow color, and has a high polish. As the seed becomes older the color changes to a reddish brown, and eventually the polish is lost, and the seed has a dull, dark reddish-brown color. Such seed should never be purchast, as it is too old to grow well.

In general the seed of crimson clover is less liable to contain many weed seeds than the seed of other clovers. It is harvested before most of the weeds have matured their seed, and being planted in late summer or fall it tends to choke out what weeds may come up with the young plants.

According to Mr. C. H. Lake, of the Maryland Agricultural College, bees produce pink comb when working on the blossoms of crimson clover. Mr. Lake wrote us as follows lately:

I note what is said in a recent number of the American Bee Journal about the pink comb from Maryland. When I again go down to the College I will get a specimen I produced two years ago. It will show for itself. Crimson clover is its origin, and the honey is also crimson, and not straw color, as claimed by experts, so-called.

C. H. LAKE.

MR. CHAS. DADANT, senior partner of Chas. Dadant & Son, called on us Monday, Sept. 25, when on his way home from a six-weeks' stay in Wisconsin, where he goes every fall to escape an attack of the hay-fever in his southern Illinois home. Tho nearly 82 years of age, Mr. Dadant is well and able to enjoy life all right. He reports his firm as having had a good trade in comb foundation this year, which we were glad to hear. We always like to know of our advertisers doing well.

* * * * *

MR. F. DANZENBAKER seems to deserve a good deal of credit for suggesting the use of springs, for holding the sections in supers. Editor Root, upon being askt who originated them, replies as follows in Gleanings in Bee-Culture:

"Those super-springs, as you found them in the supers, were devised by Mr. Fr. Danzenbaker. He got the principle, I believe, from Mr. M. H. Mendleson, of California, who uses a flat steel spring. It is more expensive, and not as well adapted to the purpose. From some correspondence that has come in of late, it seems others have been using something similar. But Mr. Danzenbaker says he was prior in the *specific form* of springs used in his supers."

* * * * *

ONLY A HYPHEN.—Stenog, the one who has control of the department of "Pickings" for Gleanings in Bee-Culture, in a recent issue of that paper is found "picking" on us in this fashion:

"Mr. York prints the name of this journal with a hyphen in Bee-Culture. Why not use one in American Bee Journal? Proper names should be printed as the owner writes them. Surely the hyphen should be omitted in the case cited."

Whereupon we referred to the Standard Dictionary, and found that the word "bee-culture" very properly appears with a hyphen. Strange that Stenog didn't know how to write the name of the paper to which he usually contributes so entertainingly. The Standard Dictionary is a pretty safe guide to follow, but we wouldn't think of objecting to so small a matter as an extra hyphen if any one wishes to put it between the last two words of the name of our paper.

SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	$1.00	$2.25	$4.00
Alsike Clover	70c	1.25	3.00	5.75
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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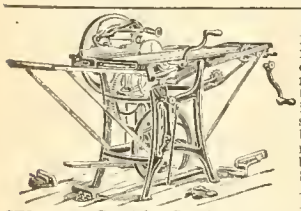

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Are Bees Out All Night?

Query 106. Do bees sometimes stay out in the field all night? This question was prompted by seeing a bee heavily loaded with pollen Sept. 21, enter the hive about 4 o'clock a.m.—UTAH.

J. A. Stone—Yes.

Mrs. L. Harrison—They do.

S. T. Pettit—Certainly they do.

Adrian Getaz—Yes, they do often.

E. France—Yes, very many of them.

Dr. J. P. H. Brown—Frequently they do.

P. H. Elwood—Yes, very often, in mild weather.

Eugene Secor—Occasionally, I think, but not often.

Mrs. J. M. Null—Undoubtedly, but not voluntarily so.

Chas Dadant & Son—Yes, they often do, in warm weather.

O. O. Poppleton—Yes, especially during a heavy honey-flow.

J. A. Green—Not as a rule, and not intentionally in any case.

W. G. Larrabee—I have no positive proof of it, but I think they do.

J. M. Hambaugh—During warm weather and a good honey-flow they will.

R. L. Taylor—During the time of basswood bloom they do to some extent.

Emerson T. Abbott—According to my observation bees frequently remain out over night.

J. E. Pond—I never knew or heard of such an instance, and very much doubt if such a thing were possible.

A. F. Brown—No. It frequently does not take a bee over 6 to 8 minutes to fly from the hive and return with a load.

Dr. A. B. Mason—Yes, I have often noticed them on flowers in the morning before any bees were leaving their hives.

Dr. C. C. Miller—I have read that they sometimes stay out over night, especially when working on linden moonlight nights.

C. H. Dibbern—Yes, very often, as they often get belated or are caught by showers, and in warm weather such bees will return to their hives early the next morning.

Prof. A. J. Cook—Yes. I have taken bees on flowers, too chilled by evening air to rejoin the hive. I think they found home, or would have done so the next day.

G. M. Doolittle—Did you have a lantern, or what? 'Tis "pitch dark" here on Sept. 21 at 4 o'clock a.m., and you could not see a bee, say nothing about its loads of pollen.

D. W. Heise—Yes, I have every reason to believe they often do, when caught by showers or storms. I could give instances which led me to this belief, but think it not necessary.

Mrs. A. J. Barber—Yes. I have shut up colonies after sunset, and even after dark, to be moved the next day, and would find bees on the screens at the entrances early the next morning.

R. C. Aikin—I guess not, unless as when trapt in a honey-house or elsewhere. If out it would not likely come loaded in the morning unless it got loaded before belated. They never stay out willingly.

G. W. Demaree—It is not the habit of the honey-bee to lodge in the fields at night. There are certain plants which the bees visit for the nectar they secrete, and which plants contain intoxicating qualities that stupefy and overcome the bees, and cause

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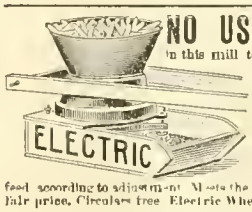

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them to lose action and stay out over night. Some of them recover by morning, and some perish.

E. Whitcomb—Quite frequently when gathering honey or pollen from quite a distance, or when overtaken by a sudden storm, they seek the friendly protection on the under side of some leaf, and return home as soon as opportunity offers.

C. Davenport—I don't know. I have often seen bees come in from the field very early, but perhaps they wake up early, or were unable to sleep at all, and so went out earlier than the others. I have never seen any sleeping out in the fields at night, but it may be some prefer to lie out in the fresh air.

Rev. M. Mahin—It is very common for bees to stay out all night. After a rainy night I have often seen bedraggled and forlorn looking bees come in in the morning. If you shut a hive up in the evening, at a time when nectar is plenty, you will be surprised at the number of bees that will be clamoring for entrance in the early morning.

GENERAL ITEMS

Best Honey Crop in Three Years.

The honey crop in this county this year has been the best for three years. My crop of 3,600 pounds is all sold, mostly extracted, at 10 to 20 cents. I could have sold a ton more if I had had it. J. M. DOUDNA.
Douglas Co., Minn., Sept. 20.

The Bee-Smoker Man's Report

I am making a cellar to winter my bees. The season has been good for rearing bees, but no one seems to think it has been up to the average for honey. My 16 little 11th-of May colonies have increased to 93, with honey enough to winter them, as far as honey will do that. Of course, my honey crop is not much, but after I decided not to increase them more, an effort was made to get a little section honey for family use, and I have 318 pounds of nice fall crop.

Last winter reduced the bees in this region more than one-half, and this winter will start in with less than ¼ that last winter did. T. F. BINGHAM.
Clare Co., Mich., Sept. 22.

Very Poor Year for Bees.

I should have been pleased to have been with you at the late bee-convention, but it was too far for me to attend. It has been a very poor year here for bees and honey. I have lost over one-half of my bees since spring came—some 40 odd colonies—and some of the balance are very weak. I don't know what the matter is with them. They fly out and drop down, and never rise again, but crawl around on the ground and die. Bees in this place are nearly all dead. Mine have plenty of honey.
[redacted] JOSHUA TERRY.
Salt Lake Co., Utah, Sept. 17.

Honey an Entire Failure.

Honey is an entire failure in this vicinity this season. I'm afraid lots of the bees will starve the coming winter, but I was lucky enough to get enough winter stores for mine. JOHN H. RUPP.
Washington Co., Kans., Sept. 15.

Probably Prairie Clover.

Will you kindly inform me what the name of the enclosed plant is. I enclose the entire top of one plant. It grows about two feet high, and bees are working on it in large numbers. It grows on land which

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consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

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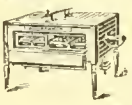

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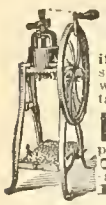

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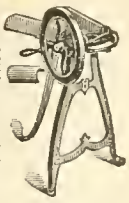

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was cleared years ago and is partially grown up to brush again.

After a cold, wet, backward spring, white clover bloomed abundantly and bees did fairly well on it. It is now past, and the first crop of Alsike is also cut. Basswood seemed to yield some this year, but my bees were out of range of it, so they did not get the benefit. Our only hope now is in the golden rods, which are just now beginning to

> "brighten, as with touch of gold,
> The summer's waning splendor,
> While every blossom seems to hold
> A message sweet and tender,"

to the apiarist to be prepared to gather the harvest of rich, golden honey, which we hope they will yield "in the sweet bye and bye." JOHN ATKINSON.

Crow Wing Co., Minn., Aug. 4.

[The plant is probably prairie clover—Kuhnistera purpurea or Petalostemon purpurea of Gray's Botany. The absence of leaves makes its certain identification impossible. Yet, with little doubt it is the above. It extends from Manitoba to Texas, and west to the Rocky Mountains, but is not reported west of this range, so far as I can learn. I have never heard of its being a bee-plant before, but I should expect it to yield nectar, from its relatives.—A. J. COOK.]

Almost No Honey.

This is the first year that I got almost no honey. There was altogether too much rain, and always at the time of a honey-flow.

I send you a willowweed plant. If you are careful you can unwind the plant without breaking the connections. The plant is 12 feet 9 inches long. HERMAN AHLERS.

Clatsop Co., Oreg., Sept. 17.

[The plant is received, and it is indeed a long sample. It unwound all right. Thank you.—EDITOR.]

Large vs. Small Hives.

There is one point in the article by Mr. Getaz on the above subject, on page 561, that he ignores. He allows prominence to the idea that a person who uses an 8-frame hive never allows the queen to occupy any more room than is provided by the eight frames, and in ignoring this expansion feature it looks as if he were trying to make a case for the large hive.

When the bees in an 8-frame hive come out strong in the spring, as they surely will if wintered right, it will transpire that in a short time the bees become so crowded for room that a super with brood-combs is added, the bees and the queen immediately taking possession, and a good queen, such as all bee-keepers should have, will soon fill

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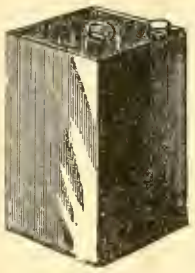

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J. M. Jenkins, Wetumpka, Ala.

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the 16 frames, at least when a 10 frame hive is used. I have had queens that would more than fill 16 frames, and as I understand the respective sizes of the large Dadant and the 10 frame Langstroth hive, the difference in comb surface is a little in favor of the latter, and as much brood can be cared for.

But to return to the 8-frame hive. What it lacks in the brood-frames can be more than made up in the addition of a third, or until there is an unlimited room the queen can occupy. Therefore, it is unnecessary to winter such enormous colonies in enormous hives.

Of course, Mr. Getaz's argument is all right as between the 80 colonies in the 12-comb hive and the 120 in the 8-comb, provided we hold them within those limits; but if we can make the 120 equal in the rearing of bees and the production of honey to 120 in the 12-frame hives, we gain in several points, ease in handling the hives, interchangeable frames, all frames can be used in an ordinary extractor, less stores in wintering, expansion or contraction practiced at will.

Yes, Mr. Getaz, give us a chance to expand, and we will make as good a showing as the large hive. J. H. MARTIN.

Los Angeles Co., Calif.

Poor Season for Bees.

The past was a poor season for bees in this part of Nebraska; indeed, the worst season for bees since I have kept them, and that is since 1891, when I started with one colony. Even that well remembered dry season of 1894 put this 1899 season in the shade all around, as to surplus honey. This year I got none, and the bees almost have nothing in their hives, and will have to be fed during winter and spring until new honey is coming in from the spring flowers of 1900, which I hope will give a big yield of surplus honey to make up what was lost in 1899, or what I did not get.

But all the same, the old American Bee Journal will have to visit me every week, if I live, and health permits. H. HANSEN.

Sherman Co., Nebr., Sept. 20.

Very Sweet Honey.

While visiting in Michigan last August, I was entertained at Mr. Hobart Paines', of Shiawassee County. For tea we had some very white comb honey. Mr. Paine produced it himself, and was sure it was from either white or Alsike clover. I am sure I never tasted of honey from flowers before that was so sweet. I should have said at once that it was produced from feeding

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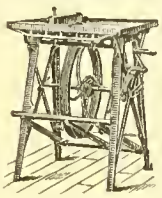

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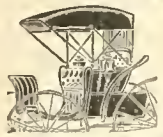

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The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

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How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

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granulated sugar. This was what interested me. I presume that the bees gathered it very rapidly, so that the transformation into glucose or levulose was not complete, or as complete as usual. Thus there was more of the sweeter cane-sugar than in the usual honey. This was also the reason why the peculiar honey-flow was so little to be detected. A large tableful of people all noticed the sweet character of the honey, and the very delicate flavor. I have tasted honey made from cane-syrup which was not as sweet, and was more characterized by the usual honey-flavor than was this.

The past week I have been away up to Julian, 38 miles from a railroad. This is in San Diego County, and is in a very fine honey region. The honey crop has been small, but good, and the bees are now in fine condition. A. J. COOK.

Los Angeles Co., Calif., Sept. 20.

Is Christianity Practical in Worldly Affairs?

Rev. Charles M. Sheldon, author of "In His Steps," one of the most widely read books in the English language, has written an article which establishes the practicability of the teachings of Christianity as set forth in his book, which have been put to the test in innumerable religious bodies the world over. Mr. Sheldon declined to write for publication anything relating to his individual work in applying his teachings of "In His Steps," until others were convinced that those teachings were applicable to every-day affairs. He has now taken up his pen and shown that the question, "What Would Christ Do?" may be answered by every Christian, and the precept followed. "Is Christianity Practical in Worldly Affairs?" will be publisht in the November Ladies' Home Journal.

Convention Notice.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec.

New Milford, Ill.

A New Feed Grinder.—The Electric Wheel Company, whose several lines of goods are familiar to our readers, are out this season with a new feed grinder. Their card appears on another page. Any who intend buying a feed grinder will please write The Electric Wheel Company, Quincy, Ill., for special catalog, and mention the American Bee Journal.

A Famous Dehorning Knife.—The advertisement of A. C. Brosius, of Cochranville, Pa., makes its first appearance in this issue of our paper for the new season's business. Our readers will remember this gentleman as being the manufacturer of the now famous Dehorning Knife which has been of such great value to stockmen everywhere. This is the dehorner which took highest award at the World's Fair. It differs from all other devices of its class in the fact that it cuts evenly from four sides at once. This prevents all bruising and crushing of the horn and constitutes the most humane way of removing the horns. Then, too, it is a quick and safe way for both man and animal. Write Mr. Brosius for circulars, prices, etc., saying you saw his advertisement in the American Bee Journal.

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Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

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Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

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Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

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York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00 For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Sept. 20.—Fancy white comb honey brings 15c; No. 1, 13@14c; ambers, 10@12c; dark, 9@10c. Extracted, white, in cans, 7½@8c; in barrels, 7@7½c; amber, 6½@7c. Beeswax, 26c.

The receipts are increasing and sales are becoming more frequent. Shipments are coming to hand in good order, and when properly prepared will do so until we get zero weather, after which it is liable to crack, and break away from the frames. R. A. BURNETT & Co.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Sept. 20.—Fancy white, 15c; No 1, white, 13@14c; fancy amber, 11@12c; No. 1, amber, 10@11c; buckwheat, 9@10c. Beeswax dull at 25@26c.

Demand good for all kinds of comb honey, and ready sale. Extracted in good demand also, excepting buckwheat, at unchanged prices.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Aug. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾, light amber, 6½@7c. Beeswax, 26@27c.

The market remains unfavorable to the buying interest, and is likely to so continue thruout the season, with supplies of very moderate volume, not only here, but also in the interior.

CLEVELAND, Aug. 18.—New honey scarce and in good demand. Fancy white, 15c; No. 1 white, 13@14c; fancy amber, 12c; No. 1 amber, 10@11c.
A. B. WILLIAMS & Co.

ALBANY, Sept. 20.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

BOSTON, Sept. 21.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 13@13½c; No. 2, 11@12c. White amber extracted, 8@8½c. Beeswax, 27c.

New comb honey is coming in very slowly, showing a general shortage all over the country.
BLAKE, SCOTT & LEE.

BUFFALO, Sept. 29.—There are virtually no arrivals of strictly fancy white comb honey. The very little arriving is poor, and the best of it brings 14 cents. We believe extra fancy would bring 15@16 cents, and any grade will sell well here. If receipts do not increase we may reasonably look for possibly higher prices. There is a very strong demand, quickly taking the few arrivals. BATTERSON & Co.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.
PEYCKE BROS.

DETROIT, Sept. 11.—Honey-producers accustomed to selling in Detroit have hard work to satisfy local trade. Very little honey in market. White comb, 14@15c; dark, 12@13c. White extracted, 7½@8c. No dark wanted. Beeswax, 23@25c. M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER.
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60-lb. cans Pure Alfalfa Clover ... 9½c
Half barrels (300 lbs.) Basswood-Clover ... 9c
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Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

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What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
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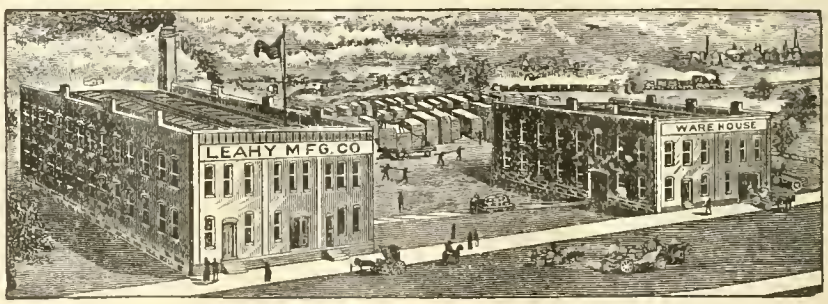

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1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., OCTOBER 12, 1899. No. 41.

CONTRIBUTED ARTICLES

Apiary of Mr. S. T. Pettit, of Ontario, Canada.

BY A REPORTER FOR THE FARMER'S ADVOCATE.

THE illustration on this page represents Mr. S. T. Pettit's bee-yard, in Elgin county, Ont., as it appeared on Aug. 9, the day of our visit. The hives are not all shown, as the camera could not be situated so as to take in the whole yard to good advantage. Enough is shown, however, to indicate the general order of the yard, the honey-house and the work-shop where hives, supplies, etc., are made. In round numbers the yard contains 100 colonies, being an increase of 20 since they were brought out of the cellar in spring.

Mr. Pettit makes a specialty of comb honey, and his bee-yard would look more natural showing the hives with comb-honey supers, but these were all removed at the end of the honey-flow about the middle of July. In fact, comparatively little comb honey was produced this season, owing to the paucity of new swarms, which Mr. Pettit uses for comb-honey production. Mr. Pettit received less new swarms per colony this year than in any year since 1895, which is accounted for by the unfavorable weather, especially during the clover bloom.

His entire honey crop from the 80 colonies, spring count, is about 5,000 pounds, 800 of which is comb honey. As there has been no honey coming in since the middle of July, the chances are the colonies will all require to be fed before winter. As will be noticed, the hives appear with extracting-supers, which are divided from the brood-chamber with queen-bars or queen-excluders.

The building to the right in the background is the honey-house, where extracting, etc., is done, and honey is stored until shipt. The other building is a work-shop, where Mr. Pettit makes all his hives and parts. Beneath this building is a stone cellar, where the bees are wintered. It is kept dark, well ventilated, and at a uniform temperature. The ventilating system is of Mr. Pettit's own invention, and is very unique. At the center of the end of the building facing the bee-yard is an outside stairway leading to the cellar-door. The door fits tightly, but has a number of 2-inch holes covered with wire-screen. Covering the stairs on a level with the ground is a pair of doors which lie flat when closed, and it is thru one of these that the ventilator is placed. It consists of an 8x8 inch square box 20 inches long. This fits perpendicularly in the door, and has a slide passing thru it, which can be opened or closed, as appears necessary by the temperature of the cellar. The top end is covered with wire-screen. Now, in order to exclude the light, an inverted box rests loosely on the top, and at the bottom end a similar box hangs bottom down. Both

Apiary of Mr. S. T. Pettit, of Elgin Co., Ont., Canada.—(From the Farmer's Advocate.)

boxes are about three inches larger than the ventilator, which they telescope about two inches each. A similar ventilator is provided for each of the two windows, so that a free circulation of air is admitted without the possibility of light entering the cellar. The temperature of the cellar is held at from 40 to 42 degrees, which prevents breeding, and holds the consumption of honey down to a minimum, and at the same time retains the vitality of the bees to the greatest possible degree.

The yard was to remain as it appears in the engraving until about Sept. 20, when the extracting-supers are to be removed, the hives weighed, and the bees fed where necessary. Each hive should contain about 30 pounds to commence the winter. About Nov. 17 the bees will be transferred to the cellar, where they will remain till the time arrives to set them out in the spring.

We would draw attention to the proprietor of the apiary sitting in the shade of the tree in the foreground. He is wearing his bee-veil attacht to the rim of a straw hat, drawn tightly from the rim and tuckt under his braces and drawn tightly across the breast, which holds the veil away from the face and neck, thus making a sting in those regions impossible. After the photograph was taken, Mr. Pettit recognized that his trouser legs should have been tuckt inside his socks, that he would appear like a bee-keeper at his work. When the trousers are thus tuckt in the bees cannot walk up inside to create trouble for themselves and the individual wearing the trousers. We would also point out the solar wax-extractor sitting in the foreground, near the clump of flowering shrub. It is set on a pivot, on which it can be revolved to face the sun thruout the day.

A COMB-HONEY HIVE AND ITS ARRANGEMENT.

By following the description of Mr. Pettit's hive, some important points in his system of comb-honey production will be understood.

1 represents the cover, beneath which is a cushion 2 inches thick, of soft, fine hay, and beneath this is a cotton-cloth, of hard, white cotton-duck, which rests on the sections.

2-2 are section supers, one-quarter inch deeper than the sections used. Mr. Pettit's are 17⅛ inches square, inside measurement, each holding 36 sections.

3, queen bar or excluder, which covers the brood-chamber, admitting only worker-bees to the supers.

4, brood-chamber.

5, wedges of wood one inch deep in front, gradually tapering to a point at the back. These are used in summer

Pettit Comb-Honey Hive and Arrangement.

to allow ventilation, and they also raise the front of the hive so as to induce the bees to go up the side-walls of the hive and the brood-combs near the back of the hive.

6, floor projects 3½ inches in front of the brood-chamber.

7-7, stand of two 6-inch boards and two 7-inch. This rests on bricks, as shown.

8, comb-honey supers, same as 2.

9-9, divider set on two of the sides of the super, as shown in position. It is ⅛-inch thick, and has ⅜-inch holes, thru which the bees pass to the sections.

10, section in position, resting on T tins 12, and against a divider. The section is filled with light foundation of good quality, within 3/16 inch of the bottom. With sections fitted with foundation in this way the bees fill them evenly.

11, bee-space of 5/16 inch, created by six blocks numbered 13 on divider number 9. The advantage of this extra bee-space at the sides of the super is to allow for a double quantity of bees to keep up necessary animal heat, which is advantageous to the finishing up and capping the combs in the sections.

The Indoor Wintering of Bees.

BY C. P. DADANT.

PLEASE allow a stranger to ask your opinion or advice in relation to a wintering place or house for my bees. I have in mind to build a house with double walls, 6, 8 or 10 inches between the outside siding and inside ceiling, and fill the space with dry sawdust, have a double floor filled in the same way. Seven feet between lower and upper floors. I can carpet or cover the upper floor with sawdust. I will be very glad to have your opinion in the matter. Also, how much space does it require to place 75 to 100 hives with bees, and the best and most proper way to ventilate the room? Any suggestions will be thankfully received.

Yours truly, R. R. JACKSON, Allamakee Co., Iowa.

We have often heard of bee-houses being used similar to the one mentioned in the above enquiry, but have never seen or tried them ourselves. Any repository in which the bees may be kept at an even temperature slightly above the freezing-point may be considered as a safe place to keep bees over winter if the place is also dry and quiet, tho the latter consideration is of less importance, as it is evident that bees do get used to noise and the trepidation which is common in noisy sports.

The question of proper temperature is by far the most important in this connection. It often happens that misinformed people try to winter their bees in empty rooms where the changes of temperature, altho less sudden and extreme than out-of-doors, are still quite great. These attempts have almost invariably proven failures. This is very easily explained. When the temperature is low, say below the freezing-point, the bees have to consume a quantity of honey proportionate to the rigor of the weather, in order to keep up the bodily heat, which, in a healthy colony should never get below the temperature of the blood. This consumption of stores necessarily causes their bowels to become more or less distended with fecal matter according to the quality of the food—less if the food be of best quality, more if of dark honey or honey loaded with pollen.

In a natural outdoor wintering the bees will, at the first warm day, have the necessary opportunity to unload their bowels, but if they are confined in a room they will become restless and will suffer, and eventually die. On the other hand, in the same repository, when the temperature is higher than necessary, they feel the natural instinct to take flight and also become restless. They often try to rear brood, and this adds the necessity of securing water, which adds to their discomfort when in confinement.

If one had but two or three colonies and plenty of leisure, and was so interested in the bees that he would be sure not to forget them, they might be confined in any dark room, so it was sufficiently sheltered, and take them out on warm days. This would of course be much better than outdoor wintering, but it is not possible with a large number of colonies, owing to the work it would entail, and the fact that some winter days are warm for a few short hours only, so the colonies that were taken out last, out of a lot of 75, might not have a fair opportunity to take flight.

In years past we were in the habit of wintering two of our apiaries indoors; in our home we have a portion of our cellar partitioned off from the main part purposely for the bees. We have not used it of late because the winters have not proven injurious. When our bees were in the cellar, my father, who has a great taste for experiments, used to go to the bees several times in the week, and at different hours, to ascertain their condition. He invariably found that they were quiet at a temperature between 40 and 45 degrees, Fahr. Below this point they would show by their hum that a little warmth was needed. Above it they were also restless, and an occasional bee would stray out of its hive and fly up to the light brought in.

I remember that an old York State bee-keeper had publicly stated that the bees could stand a very high temperature when in the cellar, provided the moisture in the air of the cellar was adequate to the rise in temperature. This he so strenuously maintained in public arguments that I took pains to interview him at a convention, and found out, to my great surprise, that he had no thermometer in his cellar, and was only "guessing" at the temperature mentioned by him.

A thermometer costs but a trifle—from 25 to 40 cents—

and I strongly urge all who wish to winter their bees in a repository to place one of these instruments in the room.

It matters but little whether the room used is above or below the surface of the ground, if the temperature may be retained at the point I have mentioned. But it seems to me much more difficult to retain sufficient heat for the purpose in a room above ground, even in a repository lined with sawdust in a climate like that of northern Iowa. In a very hard winter, unless the room contains enough bees to keep up the heat inside, we all know that the cold will, after awhile, penetrate a very thick lining of non-conducting material. How nearly the temperature may be kept to the proper degree cannot be assured except by such as have tried it.

But to my mind, in a hilly country, it would be cheaper and much safer to make the repository partly, if not altogether, in the ground. The natural temperature of cellars is higher than that required by the bees, and it is much easier to bring in cold air than warm air, unless we fuss with a stove, which would lead to trouble without end. So very probably a cellar would be best.

I have in mind a cave owned by Mr. Parent, of Benton Co., Minn., which seems to me to be about as cheap a building as may be had. I understand that in those cold regions there is but little to fear from dampness during the winter, because the ground being frozen to a great depth there is no possible chance for surface water to infiltrate. Thus they are perfectly safe from a danger against which we must carefully guard in our latitude.

The cave is dug in a gentle slope, closed with a double door, with a good bed of straw between the doors. Its walls and roof are entirely of ground boarded up, and the bee-house is placed above it. This kind of a repository is certainly better than a house-cellar, which is often enough out of the ground to become very cold, and in which one places all sorts of vegetables that are apt to more or less vitiate the air. The bee-cave is made only for the bees, and they are there in perfect quiet.

In another article I will consider the questions of ventilation, of the space required, and of the time most suitable for the removal of the bees to the repository.

Hancock Co., Ill.

Density of Nectar in Flower-Cups.

BY A. NORTON.

IN my first remarks upon this subject I did not mention Mr. A. J. Bates by name, partly to avoid offense by antagonizing him personally. And I would not further mention the subject, or him personally, but that his reply on pages 515-16 contains so many mistakes, as it seems to my humble judgment, and that he has brought out the personal feature so as to make it no object to avoid it.

If Mr. Bates will permit me I will call his attention, in a fraternal spirit, to some errors of statement of his in said reply. His first statement I do not really grasp as to whether he deals with ripe honey absorbing moisture in the comb or with thin honey parting with moisture, the thin part being drawn to the mouth of the cell. I think he overlooks the fact that (whichever way he means) the honey would never ripen or become entirely thin if the thinner parts did not take from that which is thicker. And the rapidity of the ripening of honey comes from the great readiness with which this is done.

The thick honey in the cell would stay thick with a thin surface, or the thin honey would remain thin with a thick surface (not being at the top exactly, but on one side, from its position in the comb), but that, as soon as one part becomes different from the rest, the thicker part is quickly made into the same consistency as that of the thinner part by the absorption of part of its sweetness.

Mr. Bates is mistaken in his second statement, for the earth and most objects upon it give off heat faster than does the air. Hence the air, where it comes in contact with cooler objects than itself, has its vapor condenst into dew. Dew would never form by contact of air with objects warmer than itself, as he states on page 516. From my remembrance of the structure of red clover blossoms with their slender, partly-closed tubes, the dew would not form within them, since dew does not "fall," as so many use the term; and it would probably not get into the nectaries unless it formed so plentifully over the heads as to flow over into the tubes of the flowers. Rain might beat in and wash the nectar out; but that is a different consideration.

I think the reason why the Italians work more freely on the red clover in the morning is that the flowers have been secreting nectar all night with nothing to deplete it, while the morning's work leaves the flowers more or less destitute, so that bees forsake them. If any outside moisture happens to have gotten into the flowers, it will have taken up the *same kind* of sweetening as that they hold, and will doubtless be of the same *thickness* as the rest of the contents. Even before it has become equally thick, it is equally good, needing only more evaporation, and involving difference of *quantity*, not *quality*.

Soon after reading Mr. Bates' reply, I took a small drop of honey to represent specially thick nectar, a small bit of candied honey to represent still more fully evaporated nectar, and a little sugar to represent that entirely dried down. Upon these separately I placed small drops of water no larger than the amounts of sweetening, just laying the water carefully on top with no stirring. In a less time than dew remains on flowers after it forms, these were all of evenly uniform density, with no layers that were to be detected by examination. Should thin nectar dry gradually, it would thicken uniformly unless the waxy nature of the thick product should cause a thick film to adhere at the sides or edges, and thus be held at the top instead of on the bottom of the thinner portion.

Regarding Mr. Bates' last statement, I will only say that I have made mortar in my day and am familiar with it, and that it is not lime in a state of *suspension* in water, but water in a state of *absorption* in lime, and that it has no illustrative bearing on the subject.

I don't wish to make this subject seem too important and so I will imitate Mr. Bevins by crawling back into my hole; and I promise not to speak up again, and to cheerfully give Mr. Bates, "Cogitator," or both, the right to have the last word if they desire it.

Monterey Co., Calif.

[We think this subject has been sufficiently exhausted now, so we let the above conclude the discussion.—EDITOR.]

The Dzierzon Non-Sperm Theory a Fallacy.

BY C. THEILMANN.

IN "Beedom Boiled Down," on page 538, we find the following: "The Dzierzon theory, says Deutsche Illustrierte Bienenzeitung, so far stands as solid as a rock, and it will require more proofs than have yet been brought against it, to budge it in the least."

This will probably be the last kick the Dzierzon non-sperm in drone-eggs will make, as many bee-keepers will (according to Mr. Hasty's afterthought, on page 506) try the experiments set forth by Prof. Dickel, and the formula recommended by myself. All who will try it will most surely be "comrades," as Mr. Hasty suggests.

For myself, with the experiments I had in 1883 with a swarm, and again with five swarms the past July, I have gained indisputable facts of the fallacy of the Dzierzon theory. My formula is so simple and easily performed (see page 500) that almost any bee-keeper can try it and satisfy himself of its correctness, that bees can and will produce either sex from eggs laid in worker-cells by a normal queen.

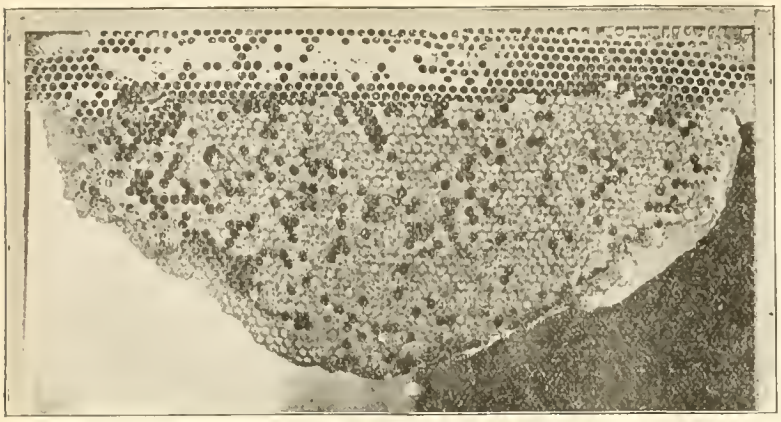
I will give the readers of the American Bee Journal the experiments I made the past summer with five swarms, to make sure of what I experienced heretofore.

On July 9 I prepared two swarms for stock colonies, with starters in frames. July 11 a frame of the above was taken and given to a swarm just issued and made queenless, and put on the old stand after the old hive was removed where they came from. The frame was partly stockt with eggs in worker cells. The same evening the hive was removed to another stand, but the bees made a big commotion on account of dissatisfaction, and some deserted the hive, but when put back to their old stand they quieted down and seemed to be satisfied.

On examination, on the 19th, the frame was destitute of eggs or larvæ, and another frame with eggs was given immediately; on July 24 four queen-cells and two drones in worker-cells were nearly completed, also about 300 workers. On this day laying-workers had already started laying—I counted nine eggs in a newly-started queen-cell.

No. 2 swarmed July 11, and was treated the same, with a frame of worker-cells stockt with eggs; examined on the 24th there were found nine queens, ten drones, and two worker-cells, all capt. This swarm also changed stands like the first.

No. 3 swarmed July 13, and treated the same as No. 2.



I found 14 queens, 6 drones, and 300 to 400 worker-cells, all capt on the 24th.

No. 4 swarmed July 13; a frame of all-worker-cells with eggs was given, and on the 24th I found 22 queens, 20 drones, and probably 2,500 worker-pupæ all sealed and capt.

No. 5 swarmed July 14, and was treated as those above, and I found 28 queens, 10 drones, and 800 to 900 worker-pupæ, all capt on the 24th. There were no drone-cells on any of the frames that were given to the swarms.

I would say here that the caged queen should be taken from the swarm as soon as all the bees have come back to their old stand and new hive. The hive should not be moved to another stand, as you will notice by my experiments of swarms Nos. 1 and 2. None except the first had any laying-workers before they had laying-queens.

I photographt a frame from No. 4, 11 days after it was given to the swarm. I had to take it 10 miles on a very rough road, and it was broken from the frame and somewhat mutilated. We could get only the view of one side. After I got home I gave it to the swarm again, but it took from two to four days longer than the usual time for the young bees to hatch out.

I send the photograph to the editor of the American Bee Journal, and hope he will publish it. I also hope that many bee-keepers will try the experiment next year, and be convinced. Wabasha Co., Minn.

Introducing Queens—More Explicit Directions.

BY EDWIN BEVINS.

I HAVE received the following letter asking for more information about my method of introducing queens:

On page 547, Mr. Edwin Bevins tells how to introduce queens. Now he of course means well, intending to assist the beginner, but how does he presume a greenhorn will proceed under his directions? He does not say where to put the queen.

Two neighbors of mine are trying his method; one has put the queen alone in the cage between the two hives, and one has placed her with her retinue on the comb above the cage. Will Mr. Bevins please tell us thru the American Bee Journal just how he does it? H. M. JAMESON.

Riverside Co., Calif.

No wonder Mr. Jameson asks for more light. I was very much surprised and chagrined at the way the method appeared in print on page 547 of the American Bee Journal. I intended to send a correction sooner, but was prevented by an illness that took me away to a health resort. Whether I omitted to write fully, or whether the editor omitted to print as I wrote, I am unable to say. Anyhow, I will give the method as I have practiced it, and always with success. [We printed it exactly as Mr. Bevins had written.—EDITOR.]

When I have a queenless colony, and the weather is warm enough so that hatching brood in an upper story will not be chilled, I send for a queen, and when she arrives I hunt for two frames having hatching brood and some honey. These frames I place over the queenless bees in an upper story above the frame of wire-cloth. The frames are put close to one side of the hive. Then I put the cover on so as to be over the frames and yet leave a space open on the opposite side of the hive large enough to admit my hands. Then I remove the tacks that hold the wire covering to the cage at the end opposite the candy, and with the thumb of the left hand I hold the wire-cloth of the cage in place until I can place the cage right down on the wire-cloth of the frame close to the lower edge of one of the frames of brood. Then with the fingers of the right hand I turn up the loosened end of the cage-cover, and the queen and accompanying bees will climb right up on to the combs. Then I put the hive-cover in place and go about my business.

If bees are hatching rapidly I do not leave the frame of wire-cloth between the two hives more than from 24 to 48 hours. If there should not be a goodly number of bees hatcht in that time I would leave it longer as a matter of precaution, altho I by no means regard it as a necessity.

Any one can easily see that the above is only a roomy way of caging the queen so near the bees she is intended to serve that when they are admitted to her presence she is regarded as one of the family. The presence of the just-hatcht bees and the remaining brood and the honey help to heighten the illusion, if illusion it is.

It may not be necessary, but I will say furthner that the frame between the two hives should have wire-cloth nailed to both sides of it, and that there should be no opening thru which a bee can by any possibility get below, or get outside, until release by the removal of the frame. Decatur Co., Iowa.

CONVENTION PROCEEDINGS

Report of the Central Texas Bee-Keepers' Convention, Held at Milano, July 20-21, 1899.

BY LOUIS SCHOLL, SEC.

[Continued from page 630.]

UNITING AND DIVIDING COLONIES.

When H. H. Hyde unites colonies, he destroys the queen of one colony two days previous, then puts most of the brood in the lower chamber of one, and sets the other body on top, using tobacco-smoke on the bees. In dividing he buys new queens, but prefers to rear them for the new division; he divides equally and removes the half with the old queen to a new location.

Judge Terral does not look for the queen, but divides equally and puts one in a new location.

WORKING UP A HOME MARKET FOR HONEY.

O. P. Hyde did not have much experience, as he ships most of his honey. He peddled some around put up in Mason jars.

Judge Terral peddles it around, and lets people know he has honey to sell. They know him as the "bee-man." He advises working up a reputation and teaching and educating the people about honey. He does not advise to sell a large quantity to a family at one time, as they generally eat too much at first and then tire of honey. He said to put it up in small packages was expensive. He weighs it out into the buyer's bucket.

Mr. Gness has also had trouble by selling too much at a time, even 50 pounds at once; while Messrs. Jones, Hyde, Davidson and others accommodate their customers with as much as they ask for. They have sold a whole barrel to a family at a time, and had no trouble. People know what honey is, and buy some from them every year.

Mr. Aten ships honey by the carload to Northern markets. He has drummers along the road who sell by sample.

STARTING IN THE BEE-BUSINESS.

Mr. Salyer advises beginners to start on a small scale with few colonies, study their habits, and read the best literature. Visit and stay with a practical apiarist, also attend bee-keepers' conventions. One year he fed his bees early to stimulate brood-rearing, and stopt in April; he lost 30 colonies by starvation, as he reared bees out of season. He used to put new supers above the full ones instead of under, when giving bees more room, and other such like things.

A good many discust this subject. Some advised to stay with a practical apiarist first, while others advised studying bee-books and papers first. After a long discussion, and hearing the opinions of each, it was at last decided that it

was best to combine all practice, staying with practical apiarist, and reading books and papers.

BEE-KEEPING COMPARED WITH OTHER PURSUITS.

"Is bee-keeping more profitable in comparison with other pursuits?"

Mr. Salyer said there was more money in bees for the capital invested, altho he could make money at other pursuits.

O. P. Hyde gave some of his experience. He made more money out of bees. He bought a lot of bees for $175, and received $700 worth of honey from that lot the first year, besides 50 colonies of increase.

Judge Terral said it was not advisable for beginners to invest much in bees at once, but best for them to start with very few colonies, and start cheaply by beginning with swarms or bee-trees.

Mr. Davenport and others prefer to have other pursuits combined with bee-keeping.

Pres. Jones says that it will pay an experienced person to buy up several hundred colonies at once, but with the inexperienced it will not do.

BEST WAY TO REAR QUEENS.

"What is the most profitable way to rear queens?"

Mr. Davidson has reared queens by many methods, and has made failures. He uses a modification of Alley's method, which is different from Doolittle's, with which he did not succeed. Place an empty comb in the breeder's hive, and in 3½ days eggs will be hatcht into larvæ. Then deprive one or two colonies of their queens and brood. Don't leave any brood, and make nuclei with the queens. Leave these colonies queenless over night, and early the next morning get the comb with larvæ, cut it into strips of one row of cells, destroy every other larva, then dip the other side into melted beeswax, and attach it to the bottom edge of the comb which has been cut out to give it a rounding bottom. After leaving the cells in these hives for 24 hours, remove them to the top story of strong colonies, with a comb of unsealed brood on each side, which brings up nurse-bees to complete the cells. Make nuclei a day before the cells hatch, and move the cells into strong nuclei when ready. Close the entrance or the bees will go back. He believes dipping cells is all nonsense, and will cause two failures to his one.

H. H. Hyde askt, Why not give two batches of cells?

Mr. Davidson—The royal jelly will be exhausted.

Mr. Davenport waits for colonies to start cells, then removes the larvæ, and puts in larvæ from his breeder.

Mr. Atchley says their plans of rearing cells is all right. He spoke on the Doolittle and Alley plans, also other methods, and cautioned queen-breeders not to go too far, and not to tear their colonies all to pieces making nuclei out of them, as that is dangerous. Have only one nucleus to each colony. Always have plenty of strong colonies to back you, or you will soon be ruined, so don't make this mistake.

Judge Terral and Pres. Jones endorst strongly what Mr. Atchley said. A queen-breeder has just so far to go, and if he leans over just a little when the demand exceeds his supply, he will generally proceed too far, and is sure to go down. Mr. Atchley is right about having large colonies to back you; have only one nucleus to each, and if you get a dollar out of it, it is just as good as found, as the strong colony is still there tending to its business. This venturing too far has ruined many a queen-breeder, as by tearing his whole apiary to pieces he was left without any bees and no strong colonies to back him.

Mr. Davidson also spoke on this, and before venturing too far he returned the money if unable to fill the orders.

Mr. Atchley objects to both going too far or returning the money. Have plenty of colonies to back you.

SECOND DAY—AFTERNOON SESSION.

BEST WAY TO REAR BEST QUEENS.

Mr. Atchley gets good queens out of cells from natural-swarm cells as any other method. Select all the good cells, and destroy all bad ones. Large colonies are not really necessary to rear good queens. He reared some of his best queens in a little after-swarm. Always attend closely to business.

Pres. Jones prefers a strong colony in a cool spring, also later in the season, as it can use a larger lot of cells. Strong colonies are always essential, and none too good at any time. Select good cells. He tried almost all methods to rear queens, and prefers Doolittle's cups, also Pridgen's method of rearing good queens. Have colonies in good condition with bees of the right age, and plenty of nurse-bees. Budded cell-cups in the upper story of a strong colony with moderate or good honey-flow gave good results. He has had queens mated and laying in upper stories without running down his old colonies. It is a hard matter to have cells built in upper stories when conditions are not right, and no honey coming in. He can tell bad and defective cells on the third day, and selects his cells for good queens.

BUYING GOOD QUEENS.

"Can the honey-producer afford to buy good queens rather than use the ordinary or poor ones he may have?"

It was agreed upon by nearly all to buy good queens if the bee-keeper has no means to rear good ones. He will be greatly the looser if keeping poor queens, and can't afford to tolerate them.

The following resolution was read and adopted:

Resolved, That we, the Central Texas Bee-Keepers' Association, in session assembled, do hereby extend Mr. and Mrs. E. R. Jones, and the good people of the city, our sincere and heartfelt thanks for the hospitable way they have entertained us during our stay in their city; and that this resolution be incorporated in our minutes.

COLOR OF HONEY AND COLOR OF COMB.

"Does the color of the honey gathered have anything to do with the color of the comb?"

All said yes.

Pres. Jones related a case of last spring when bees gathered the darkest kind of honey, almost black, and yet the comb was very white. It was honey-dew.

Mr. Aten said it was not honey, then. It was "bug-juice," and the bees did not make the white comb from it.

"Is it a fact that queens reared from older larvæ will hatch later than queens from one-day-old larvæ?" They hatch first before the time of hatching good queens.

PREVENTION OF SWARMING.

"What is the best method to prevent swarming?"

Provide plenty of room; give third and fourth super if necessary. Can't prevent swarming after the bees get the swarming-fever.

Mr. Brown said: Room, shade, and ventilation.

Pres. Jones runs more closely for comb honey, which taught him that plenty of room for the queen and also in supers is best. Use a young queen; no other when producing comb honey.

BEES FOLLOWING THE APIARIST AROUND.

"How can you find colonies of bees whose workers follow one around in the apiary?"

H. H. Hyde watcht the kind of workers and found their colony, dequeened it, and the trouble stopt.

Mr. Aten and others kill them, as they are only a few bees from certain colonies.

BROOD-NEST BEFORE THE HONEY-FLOW.

"How would you prepare the brood-nest just previous to honey-flow for extracted honey in Jamaica?"

Mr. Aten has prolific queens; lets them lay in all stories to have lots of hatching bees just previous to the flow, and the bees fill all cells with honey in upper stories, out of which the young bees hatch.

O. P. Hyde—Strong colonies and good, prolific queens. Study your locality and know just when the flow starts. Have plenty of hatching bees just before the flow, and let the queen use all the stories. No queen-excluders. Bees fill every cell in the upper stories as soon as the bees hatch out, and crowd the queen down.

Mr. Atchley endorses the above plans. Plenty of empty combs on hand is as good as money in the bank.

SWEET CLOVER—ITS VALUE, ETC.

A question was askt in regard to sweet clover, its value, etc.

Mr. Davenport gave quite a lengthy talk on this subject. Sow in the fall, in September, on unbroken ground. It grows and sprouts out well. Next September sow another seeding on same ground, to give a good stand. It has a tall growth, and stock like it. It requires about 15 pounds at each seeding; on good land about 10 pounds. It blooms very profusely, and a good honey-flow from it lasts from May 10 until frost. It is easily killed out by plowing. After being cut it runs out suckers and blooms again until

fall. It has somewhat peculiar roots of a knotty character, resembling—well the following will explain itself:

One day Mr. Davenport happened to see some travelers stopping near his sweet clover field, and a man digging at some of the bunches. On turning around he said, "They are very deep."

Mr. Davenport was surprised, and so he askt, "What?"

"Why those goober-peas," was the reply.

So it will be seen that, as that man was from Georgia where he knew all about 'em, sweet clover roots resembled his peas.

This being the last subject on the program the convention adjourned to meet next year at Hutto, Williamson county.

The apiarian exhibit in connection with the meeting comprised some very useful implements, and fine samples of honey and wax.

The list showed 3,524 colonies represented by the members present. LOUIS SCHOLL, *Sec.-Treas.*

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Carrying Out Dead Bees.

What ails my bees? About a month ago I noticed bees carrying out what lookt like white wings. Now early in the morning I notice, from six hives, the bees carrying out white dead bees, and even some small live ones with a sort of white film about the body. OHIO.

ANSWER.—It may be that all the young bees carried out are those that have been damaged by worms, and it may be that part of them are young drones in the larval state that the bees are carrying out because the honey-flow has ceast. There is nothing alarming in either case, and the thing to do in order to avoid trouble with worms in the future is to keep your bees strong and of Italian blood.

Perhaps Only the Poor Season.

I have three colonies this season. I had four last season, but lost all but one, and I moved it home about ½ mile. It was in a cracker-box. Last fall I took the top box off and got 75 pounds of honey; in place of the box I put on top one-half of a painted hive I made, and this spring they went into it and made four combs nearly the full length, and workt till the first swarm issued. They then left the top and did nothing since, and the other two swarms seemed to fill the bottom of the hive with comb, but don't work in the top. I uncovered the cracker-box to-day, and I find no honey in the cells nor capt. They seem to be starving and working.

Now what is the matter with them? There is a bad odor. In July I noticed many young bees carried out of the hive not fully formed. I sometimes think they have foul brood. Is there nothing that will kill the disease except removing into new hives? I thought probably they left the top because I lookt at them once or twice a week. I dislike moving them so late. I have lookt the journals over, and read all articles on foul brood. IOWA.

ANSWER.—Very likely there is nothing at all the matter except that the season has been poor and the bees have not gathered enough to fill up with. In the first place, the original colony began working all right in the upper story. Then the two swarms depleted it so much that there were not bees enough to store above, and the work there was stopt. The two swarms have probably been working away the best they could, but the season has been probably poor, as it has also been in most localities, and it is asking too much in a poor season to make three good colonies out of one. It may be necessary for you to feed in order that there may be enough stores for winter.

The white brood carried out was not from foul brood. Bees don't carry out brood affected with foul brood, but let it decay in the cell. A bad smell does not necessarily come from foul brood, for sometimes a very disagreeable smell will be in a hive for a short time that seems to come from the stores gathered. While there is a possibility that there may be foul brood, there is nothing in the statement you make that may not easily be accounted for without the presence of any disease.

Late Transferring and Uniting.

1. I have kept bees only the past six months, but if I have no honey to show, I have gained in experience, as I have transferred several box-hive colonies and introduced a queen successfully. One of my neighbors intends to brimstone a number of this season's first swarms for the honey, but will give me the bees if I take the honey away. Is it too late to build up a good colony from them by feeding?

2. Would you give them an Italian queen, or wait until spring?

3. Could I put the two or three colonies together? They will have to be carried two miles, and perhaps the shaking up would keep them from quarreling.

4. How late in the fall could I build up a colony?

CONNECTICUT.

ANSWERS.—1. If the weather is favorable there is probably time yet to accomplish your purpose.

2. It would be better if the united colony could start in at the very beginning next spring with an Italian queen, but there are difficulties in the way. The bees not being on combs yet, it will be hard for you to look over them to find the black queen or queens, and after combs are built it will be pretty late.

3. Unless the colonies are *very* strong, you will succeed better to unite two or three in one, and you are right in thinking the shaking up of the journey would help to prevent quarreling. Being deprived of all combs will also prevent quarreling.

4. That depends upon the character of the season. You may do the work any time in the fall if there is still left two or three weeks of weather warm enough for bees to fly. Of course, the earlier the better, and the bees should have full sheets of foundation.

Arrangement for Wintering Bees.

1. What do you think of my plan for out-door wintering? I have 35 colonies. My plan is to take good No. 2 tongue-and-grooved siding or flooring 16 feet long, and as I keep my bees about 3 inches from the ground, I would shift them a little day by day until I got them in rows of 10 in a row, then take the lumber that I just named—take some 1x2 inch strips and make the back 30 inches high, the roof 30 inches wide, so that I can take the back and top and front down in separate divisions; smooth the earth off a little, and let the hives rest on the earth about 2 inches apart, and leave a space of about 4 inches behind the hives and the back of the shed or box that I put the bees in, and stuff it in tight behind and between the hives with dry oats-straw. Then make a front to the little shed all in one piece, so I can let it down or leave it up, just to suit the weather, but will not put any straw in front of the hives at all, have them face the South, and as the hives sit on little inch thick strips, it leaves the space of 3 inches under the hives to be packt with straw. By using a lath about two feet long the straw can be packt around the hives very solidly and neatly.

It will cost me about $15.00 to fix them that way. The lumber can be taken down in sections, and put away when not in use. They will last a long time that way, and be a short job to put them up or down.

2. If made that way would the bees get mixt up if they were moved a little at a time the way I spoke of? You see, I would shut the front of the shed when it is real cold, and sometimes in the middle of the day, when it warms up a little, and the snow is real dry, I would close it and the bees would not fly to get stuck and die in the snow. It would be almost the same as a chaff hive, and lots cheaper.

3. Do you think if fixt that way they would breed in the wrong season on account of the sun shining on the fronts of the hives? I would leave the front of the shed or

box, or whatever you call it, open, except in real bitter-cold weather.

I would not pack the bees before Nov. 15. I would get the hives spaced sooner, but would not put the little shed around them until that time. KANKAKEE.

ANSWER.—1. Your plan will probably work well, altho it will be some trouble to move the hives together and then get them back again in spring.

2. There might be some mixing up, but hardly enough to do any harm if the moving is gradual. If one or more days come when the bees do not fly, then there will be no use in moving again till the bees fly.

3. It is not likely that any great harm would come from breeding out of season.

A Queen Lays Two Kinds of Eggs.

There is a dispute between two bee-keepers. The question is: Does a queen lay different kinds of eggs—queen, drone and worker—or does she lay the same kind of an egg in each cell, and the bees do the rest? NEBRASKA.

ANSWER.—A normal queen lays two kinds of eggs, impregnated and unimpregnated. If the egg is impregnated on its passage thru the duct that leads outward, then it will produce a worker. If unimpregnated it produces a drone. An impregnated egg may also produce a queen, if properly fed for that purpose by the nurses. That is according to the Dzierzon theory, which up to the present time is generally accepted among bee-keepers.

A Method of Wintering Bees.

On page 500 is an article by D. H. Metcalf, describing (in part) his method of wintering bees, but I must confess I do not understand his system. Can you tell me how his hives are made, how those storm-doors or entrances are arranged, and in what part of the hive they are located? If his system is a success, as represented, will it not be a boon to the bee-keeping fraternity? Is it not worth investigating, and giving it a trial? If you cannot give a full description of the system, perhaps you can induce the author to do so. UTAH.

ANSWER.—I don't know enough about Mr. Metcalf's plan to reply, and perhaps he will be kind enough to give the desired information. In reply to your question whether his system will not be a boon to the bee-keeping fraternity, I must confess I don't know. First, because I don't know just what his system is, and second, because he goes "contrary to the advice of all experts." Without saying Mr. Metcalf is not eminently successful in wintering, that sounds just a little as if all others of experience are wrong and only Mr. Metcalf is right, and it may be a question whether Mr. Metcalf's success is because of his leaving the beaten path of all bee-keepers of experience, or in spite of it. Of course there is a *possibility* that all others are wrong and Mr. Metcalf right, in which case he is entitled to all the more credit for blazing a new path.

Size of Hive—Average Surplus, Etc.

1. What size of hive will be about the best for this locality, the 8 or 10 frame dovetailed, or wouldn't it be better to use the 8-frame 1½ story for brood, instead of 10-frame one-story?

2. About what is the average of surplus honey per colony in this (Rice) county, or in this State?

3. Is Minnesota good for producing honey?

4. Can there be used more Ideal supers than one at a time?

5. What super is the best for producing straight sections, and the most of them? MINNESOTA.

ANSWERS.—1. The best size of hive depends much upon the man and the management, as also on locality or pasturage. The matter has been pretty fully discust in this and other bee-papers lately, occupying many pages. As you speak of sections, you probably mean to run for comb honey, in which case the 8-frame hive may suit your purpose, using two stories whenever more than eight frames are needed. But unless you give close attention to the bees, the 10-frame hive will be better, with less danger of starvation in winter. The objection to a 1½-story hive is the two different kinds of frames; otherwise you might like it. Try to find out the kind of hives used by the most successful bee-keepers in your region, and if you cannot satisfy yourself in this way you can try two different sizes side by side on a small scale, and find which succeeds best in your hands. Indeed, this latter way, altho taking time and trouble, is the more sure way.

2. I have no means of knowing, but perhaps some bee-keeper in your county will give his average in these columns.

3. Some bee-keepers have succeeded well in Minnesota.

4. They may be piled up to any extent.

5. One super will produce as straight sections as another, providing separators are used; and the number of sections does not depend upon the sort of super.

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

BEES AND PEAR BLIGHT.

"Hast thou found me, O mine enemy?" The enemy has found us this time, it seems—and has secured a scientific certificate of the fact. Bees actually guilty of carrying the blight with them from infected orchards to healthy ones. Sorry. But what then? Squirting poison on the bloom will not kill the bees promptly enough to prevent it at all. Better squirt at something that needs killing, and do the job at killing time. Perhaps in time even the scientists may reflect that bees do not *very often* visit two orchards the same day. Page 565.

WATERMELON-JUICE FOR WINTER STORES.

Possibly Dr. Miller's reply about watermelon-juice, page 551, may need a little bit of qualification. I have read somewhere about watermelons in Italy being largely fed as a winter supply. If any one has that scheme in mind he should remember that the winters of Italy and our Northern winters are very different affairs. Success there would not necessarily mean success here. Better go slow till American experience in a long, hard winter decides the matter. It's a seductive scheme for lazy folks, to sell all the honey, and then make the bees stock up for winter on late melons, sliced few at a time right where they lie.

STINGLESS OR "COOL-TAIL" WASPS.

Scientific item by Prof. Cook, page 555. No stingless wasps. Thanks. The wasps are a very numerous generation (some of them nocturnal), and most of us did not know for dead sure what to expect of their little tails. Wish he had explained whether the phrase, "in our country," meant that there are some outside, or only that science does not presume to say yet all that is, or isn't, in central Africa and central Asia. And I thirst for more information about *male* wasps—whether all, many, or only a rare few of them have cool tails.

TAR-MAKING SMOKER-FUEL.

On page 549, we find Dr. Miller's Black-Drop. No one admires it, or even prescribes it; but Mr. Thompson and many others continue to retail it by the drop around their otherwise cleanly premises. Business goes right on, even if you clean the smoker and wash it with tears. Dr. Hasty would prescribe a change of *fuel*. Some fuels are always daubing things up with fluid tar; some never do anything of the kind, and some seem to be which and t'other, according to weather and the circumstances. Pays to have some fuel in stock that won't make tar.

DEEP FRAMES FOR WINTERING.

Significant that Edwin Bevins finds, page 548, that his colonies on deep frames do not die in winter and leave him frames *of that sort* to experiment on. Still, this reviewer inclines to say, don't be too fast in deciding whether it is the mere depth of the frame, or the increast size of the brood-chamber, that causes the good results.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Philadelphia Convention Report is again delayed, we regret to say. The copy did not reach us in time for the usual installment to appear this week, on account of the illness of Secretary Mason. We hope that it will not again be delayed, as it is quite trying to us as well as to our readers.

A Consolation it may be to many a bee-keeper this year, when prices of supplies are advancing, to know that such advances do not directly affect him. He does not need to pay the advanced prices for shipping-cases, nor yet for sections for the next season. All of which consolation comes from the fact that he has had no crop this year, so needs no shipping-cases, and the sections (if he has any on hand) intended for the crop of 1899 are all right for the crop of 1900.

Cleaning Up Unfinisht Sections.—This is a good time of the year to recall the views of experience as to sections having too little honey in them to be put on the market. A large number are agreed that such sections, if properly cleaned out, are valuable for use the following season. But there is no means by which the bee-keeper can properly clean them, unless he has it done by the bees. If they are extracted, and the least particle of honey remains in them till next season, that least particle will granulate, and if the bees store honey in it subsequently it will be a spoilt section. So it is the practice of some to let the bees do all the work of emptying and cleaning without at all resorting to the use of the extractor. The trouble is that the average beginner will have not only the whole of the honey emptied out, but the larger part of the comb as well.

Two quite diverse methods of avoiding this tearing of the combs by the bees have been advanced. Dr. Miller says: "Put your supers of sections in piles where the bees can rob them, but give them so small an entrance that only one bee at a time can enter." The late B. Taylor gave nearly opposite advice, saying: "Put your supers of sections fully exposed, so the bees can all get at them from all sides." Both ways are right used under the right conditions.

Suppose you have an apiary of 50 colonies. If you have a single super of unfinisht sections to offer the bees for a job of polishing, the Miller plan will succeed perfectly, while the Taylor plan will leave most of the comb chewed up fine. If you have 50, or even 20, such supers to offer the 50 colonies, either plan will succeed, but the Taylor plan will make a much quicker job, and in some cases that is quite important, as a closing down of the temperature may prevent work on future days. So if you have many sections to be cleaned out, give them all the publicity possible, but if less than perhaps ten sections to a colony, give entrance to only one bee at a time. In any case, get the cleaning up done by the bees as early as possible.

Illinois State Fair Apiarian Exhibit.—It was our pleasure and privilege again to attend the State Fair of Illinois, held at Springfield the last week in September. Of course, we were most interested in the exhibits made by bee-keepers, and doubly so as it was our duty to act as judge in awarding the $268 in cash premiums offered in the apiarian department.

Before giving a list of the winners of the premiums, we wish to congratulate the bee-keepers of Illinois upon two things. First, their good fortune in having so able and interested a man as Mr. H. J. Cater as superintendent of the department; and, secondly, we feel that they deserve special commendation upon the large and attractive exhibit put up this year. We believe it exceeded in extent and general display anything that has hitherto been attempted by the bee-keeping industry of the State.

The following is the premium list, with those who secured them, and the several individual amounts:

Display of comb honey—1st premium, J. Q. Smith & Son, of Logan County, $20; 2nd, W. Z. Hutchinson, of Michigan, $15; 3rd, Jas. A. Stone & Son, of Sangamon County, $10.

Collection of labeled cases containing 12 or more pounds of white honey from different flowers—1st, Chas. Becker, of Sangamon County, $8; 2nd, J. Q. Smith & Son, $5; 3rd, W. Z. Hutchinson, $3.

Collection of labeled cases containing 12 or more pounds of amber or dark honey from different flowers—1st, J. Q. Smith & Son, $8; 2nd, W. Z. Hutchinson, $5; 3rd, Geo. Poindexter, of DeWitt County, $3.

Case of white clover comb honey, 12 to 24 pounds—1st, W. Z. Hutchinson, $4; 2nd, Jas. A. Stone & Son, $3; 3rd, J. Q. Smith & Son, $2.

Case basswood comb honey, 12 to 24 pounds—1st, Chas. Becker, $4; 2nd, W. Z. Hutchinson, $3. (No 3rd entry here.)

Case amber comb honey, 12 to 24 pounds—1st, J. Q. Smith & Son, $4; 2nd, W. Z. Hutchinson, $3; 3rd, Chas. Becker, $2.

Display of extracted honey—1st, J. Q. Smith & Son, $20; 2nd, Chas. Becker, $15; 3rd, Jas. A. Stone & Son, $10.

Display of honey extracted on the ground—1st, J. Q. Smith & Son, $5; 2nd, Chas. Becker, $3; 3rd, W. Z. Hutchinson, $2.

Frame of comb honey for extracting—1st, Jas. A. Stone & Son, $5; 2nd, J. Q. Smith & Son, $3; 3rd, Chas. Becker, $2.

Display of candied honey—1st, Jas. A. Stone & Son, $20; 2nd, W. Z. Hutchinson, $15; 3rd, J. Q. Smith & Son, $10.

Display of beeswax—1st, Jas. A. Stone & Son, $12; 2nd, J. Q. Smith & Son, $8; 3rd, Chas. Becker, $4.

One-frame observatory hive of dark Italian bees—1st,

Geo. Poindexter, $4; 2nd, Mr. Shank, of Adams County, $3; 3rd, J. Q. Smith & Son, $2.

One-frame observatory hive of golden Italian bees—1st, J. Q. Smith & Son, $4; 2nd, Geo. Poindexter, $3; 3rd, Mr. Shank, $2.

One-frame observatory hive of Carniolan bees—J. Q. Smith & Son, $4; 2nd, Geo. Poindexter, $3; 3rd, Chas. Becker, $2.

Honey-vinegar, one-half gallon, with recipe for making—1st, W. Z. Hutchinson, $4; 2nd, Jas. A. Stone & Son, $3; 3rd, Geo. Poindexter, $2.

We feel that special mention should be made of the exhibit put up by J. Q. Smith & Son. In space occupied, in quality and quantity, and in general attractiveness we have rarely seen an exhibit of a similar nature to equal it. It was a pleasure to the judge, when he had finisht his work, to find that this exhibit had deservedly led in the race for the premiums offered.

The other apiarian exhibits were good, and were a credit to those who went to the effort and expense to prepare and place them. All must have served as a silent but effective educator to those who knew little of the extent and importance of the industry of bee-keeping in Illinois.

We hope that next year even more of the bee-keepers in this State will be found among the exhibitors, and thus show their appreciation of the efforts of Mr. Cater and the Fair managers to give apiculture an opportunity to place its products before the people in a proper manner.

Supt. Cater hopes, another year, to have the apiarian exhibit on the first floor of the Dome Building instead of the second floor. He wants the dairy and apiary together, which is quite proper in "a land flowing with milk and honey"—only in this case it would be *butter* and honey. The corner of the building now occupied by the Culinary department would be a splendid location for the Apiary department, as the light all around it is all that could be desired. It is to be hoped that Mr. Cater will succeed in securing it for the bee-keepers. The *best* place is none too good for them, you know!

A Gala German Honey-Market.—Mr. F. L. Thompson tells, in the Bee-Keepers' Review, something about a unique way they have of marketing honey in Germany. Here is his report of a certain affair:

On Aug. 29, 1897, thru the efforts of the Kaerntner Association, a honey-market was held in the city of Friesach, in Kaernten. For weeks before, the occasion was advertised in the local newspapers of the district. The city was decorated on that day, and about 500 strangers, outside of the townspeople, came to be entertained. The market was held in the afternoon, in ten large tents, decorated with branches of fir, containing long tables spread with white cloth on which the honey was arranged, mostly in glass. In some of the tents exhibitions were given by 16 boys and girls of the public school, in uncapping and extracting honey, making foundation, and nailing frames. The costs were reimburst by the sale of souvenirs, such as scarf-pins representing bees, etc., by young women in country costumes. The sale of honey was a success, altho the prices were pretty stiff in comparison with the customary ones, and many orders were taken to be filled later.

The day was closed by a bee-keeper's convention, at which it was resolved to hold another market the next year at another town.

Special Notice to Our Subscribers.—Returning a copy of the Bee Journal to this office will not secure its discontinuance. If you want your copy stopt, be courteous enough to write us, enclosing any back dues, and request that it be discontinued.

Foreign subscribers will please remember that all the offers we make at any time are only for people living in the United States, Canada and Mexico. To all other countries postage is extra not only on the American Bee Journal itself, but on nearly everything else. It will thus easily be seen by any thinking person that any prices we quote are not for people living in foreign countries.

Again, when you wish us to change your Bee Journal address on our list, don't fail to write us both your new and old addresses. Otherwise we can't find your name so as to change the address.

Dr. A. B. Mason, Secretary of the United States Bee-Keepers' Association, writing us Oct. 5, said:

Friend York:—We got home late last Saturday night, and I with a slight chill nearly all the way from Buffalo, and have had quite a sufficiency at frequent intervals since. In spite of the doctor, I sit up a few minutes and then lie down for a few hours, perhaps, more or less, but am a little better to-day.

I'm as sorry as you about delayed report, and would not have had it begun so soon if I had supposed we should be kept from home so long, but it was impossible to do any better. I enclose what I have, and am expecting more every day, and I'll keep you supplied hereafter.

When we got home we found our daughter Flora had broken her right arm at the time Mr. Abbott was reading his paper at the convention, but the children hadn't said a word to us about it until we got home. It was well set, and is doing well.

Well, I must lie down again, but have a pile of unanswered mail on hand. If Flora had broken the left instead of the right arm I would not have to write.

Yours truly, A. B. Mason.

We were very sorry indeed to hear of Dr. Mason's illness and Miss Flora's serious accident. The Doctor's many friends will regret to learn of his afflictions, and unite with us in the hope that both he and his daughter may speedily recover, and again be as strong as ever.

* * * * *

The Illinois Stock-Breeders' Association will hold their annual meeting in the State House at Springfield, Nov. 14, 15 and 16. This includes the associations devoted to breeding horses, cattle, swine and sheep—four of them. A splendid program has been issued, a copy of which may be had by writing Secretary Fred H. Rankin, Athens, Ill. We notice that Jas. A. Stone, Secretary of the Illinois State Bee-Keepers' Association, is down to discuss "Sheep-Breeding." Tho quite a sheepman, our good friend doesn't look a bit sheepish!

Low rates on all the railroads to Springfield will be in force at the time mentioned. Address Secretary Rankin for any further information you may desire.

* * * * *

Mr. John W. Lyell, of Washoe Co., Nev., wrote us as follows, Sept. 25:

"I cannot well do without the American Bee Journal. It has come to be too regular an object of interest on our center table to miss one now. The honey crop will be below a three-fourths crop as far as heard from, but prices are unusually low, according to quantity. Quality is excellent."

* * * * *

The Pettit Pictures shown in this number of the American Bee Journal are the property of the Farmer's Advocate, publisht at London, Ont., Canada, one of the best agricultural periodicals on this continent. They very kindly loaned us the two engravings.

* * * * *

Mr. E. R. Jones, president of the Central Texas Bee-Keepers' Association, writing us Sept. 29, said: "Dry, *dry*, DRY! Many bees are actually starving to death."

The Premiums offered on page 655 are well worth working for. Look at them.

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And Several Other Clover Seeds.

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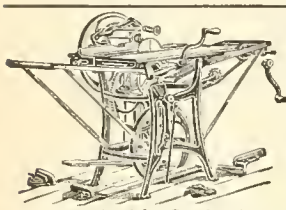

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BEEDOM BOILED DOWN.

Doolittle's Cell-Cups, according to an item in Gleanings in Bee-Culture, will probably be put on the list of bee-keepers' supplies in the near future.

Why No Honey from Clover.—D. D. Hammond says in Gleanings in Bee-Culture that no matter how abundant is the bloom on white clover of the first season's growth, it will yield no nectar till the growth of the second year.

Still a Different Hive is Wanted by R. S. Chapin, who says in Gleanings in Bee-Culture that he doesn't want a Draper "barn" with its 10 frames, but he would like a hive with 8 frames of the deeper sort. This would give him all the advantages of the ordinary 8-frame hive, which he likes, aside from the objection that it contains a scant supply of stores for winter.

Rambler's Improved Honey-Strainer is described in Gleanings in Bee-Culture. Simply cheese-cloth; but cheese-cloth soon becomes clogged. So he provides against this by having cheese-cloth 3 yards long and ½ yard wide, each end attacht to a roller, somewhat after the fashion of a window-shade on a roller. When the part in use becomes clogged, it is rolled up, and a fresh part rolled off from the other roller, and this is continued till the whole 3 yards has been used, when the whole piece can be washt.

Burying Bees in Winter has been little mentioned of late years, but Lebrecht Wolff speaks of it in highest terms in Deutsche illustrierte Bztg. No disturbance thru frequent changes of temperature, no seductive sunbeam entices the bees forth to their ruin, no disturbance from rats, mice, etc., no winter's cold severe enough to injure them; quietly they sleep away their winter's rest, leaving the bee-keeper free from all care regarding them. The view formerly held, that it is desirable for bees to have a flight in winter is now generally given up, says Herr Wolff, a cleansing flight in December, January, or the first half of February being highly detrimental to the bees.

The slaughter of bees by brimstone is the heading of an article in a German bee-journal in which the writer deplores the continuance of the old custom in his land by which thousands of colonies are sacrificed, and proposes to put a stop to it by buying up all colonies condemned to the sulphur pit. Not being able financially to compass the whole field, he makes an appeal to his bee-keeping friends to come to his aid by seuding him orders for colonies. One is somewhat puzzled to know whether this is a bit of shrewd advertising, but against it is the high character of the journal in which the article appears—Deutsche illustrierte Bienenzeitung—as well as the fact that he claims to ask only the price he himself pays, which may easily be, since he asks only $2 50 for a colony with 16 to 25 pounds of honey, guaranteeing safe arrival.

Markets Bare of Honey, and Why.—I have already spoken of the markets generally being bare of honey, and that the cause was due to the fact that buyers were not offering enough. Altho I have spoken of this in this issue, I believe the matter needs *special emphasis again.*

Bee-keepers should not be in haste to sell their honey just yet. Honey has advanced very materially in California and the West

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generally. Extracted that sold in California for 3½ cents is now selling for 7. According to the same ratio, comb honey that sold two years ago at 10 cents in our markets should now bring 20; and yet 13 to 15 is about the top notch of the Eastern market. If the buyer wants honey it appears to me he will have to offer more than these figures. There is evidently much honey in Colorado, but it will never find its way East until our markets advance more than they have done.

It should be understood that commission quotations usually stand higher than cash offers, for the reason that from the former must be deducted freight and 10 percent commission; but in whichever way the offer is made, the honey-dealers should understand that they will have to advance some before they will have much honey to offer. —Editorial in Gleanings in Bee-Culture.

The Maroon-Yellow Question, and Pure Italians.—To the question askt Mr. Doolittle by Dr. Miller, why it was that Mr. Doolittle in all these years never before said that Italians were maroon and not yellow, Mr. D. starts to make reply in Gleanings in Bee-Culture, but before reaching the question proper seems to become switcht off onto a side-track, and never returns to the main line. He refers to the discussion in the early seventies about the purity of Italians, when he says it was fully proven that the Italians are not a pure race. Then the matter died down, says Mr. Doolittle, who continues:

"But for the past 5 years this matter of 'markiugs' has again forged to the front, and the low rumblings of dissatisfaction first heard have almost reacht the fury of a storm, and parties are being denounced for lying about the markings, purity and color of their bees, and thus an *unimportant* matter has become an *important* one."

Editor Root replies that they sell $2,000 to $3 000 worth of queens every season, this year more than ever, and if any complaint has come in to them with regard to the color matter he does not remember to have seen it. He says he agrees with Mr. Doolittle that the only way to determine the purity of Italians is by their markings, and that "placing bees on a window, before the light, is an extreme and perhaps unreliable test for the determiuation of the purity of the bees in questiou."

GENERAL ITEMS

Well Satisfied with Results.

I bought one colony of bees last fall; they wintered well, and in the spring I put them out and kept the cold winds from them, and also protected them from the hot rays of the sun. They gave me two good swarms in June, and as I did not want them to swarm again I took 10 pounds of box-honey from the super the first of July, so as to give them room. Sept. 15 I took 30 pounds more of box-honey from the old colony, and 30 from the first swarm, none from the second. This is my first experience. I am very well satisfied. As there are no bees kept within several miles of me, and there is plenty of clovers, basswood and golden-rod, I hope to keep quite a number of colonies and do well. I followed the Bee Journal's advice. WM. BROWN.

Herkimer Co., N. Y., Sept. 23.

One of the Numerous Asters.

Our bees are rolling in nectar from wild aster, whenever it is warm enough for them to work on it. Our first frost came about a week ago and still it does not seem to have any effect on the aster, altho we have had two or three frosts since. I send a bunch of asters, showing its stalk and blooms, which I pluckt from a swamp where

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consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

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the frost was severest. Very little pollen seems to be gathered from it. It grows two and three feet high, and seems to grow as well on old, wornout, rocky fields as anywhere. I consider it a very good honey-plant, altho its honey does not rank with white clover. I would like a report on it.

It seems as if I could hardly wait for the time for the "Old Reliable" to come, especially since the beginning of the report of the Philadelphia convention. Its brilliant pages seem like a new hope, and to thrill the whole body, which only a bee-keeper can experience.

J. WILEY MOUNTJOY.

Anderson Co., Ky., Oct. 11.

[The asters are so numerous, and the flowers of so many are so nearly alike that it is somewhat difficult to determine the variety unless one is pretty well up in that line. Sometimes leaves are the only distinguishing features of a dried specimen, and should always accompany the plant when possible.

I believe the plant to be Aster piniceus. The flower is quite common in low thickets and swamps, and in common with others of its kind furnishes abundance of good, rich nectar for fall storage.—C. L. WALTON.]

Bees are Like People.

I have concluded that bees are like people, when some will do well others will do nothing. I have colonies that did not give me a pound of surplus, and another right beside it that gave me 28—both good, heavy colonies. What's the trouble? A change in administration is what is wanted, and I am putting in Italian queens in those colonies that did nothing.

The season has been bad here, dry and hot. When I read about those large honey records it seems queer when I can only get 25 pounds, but I get 25 cents for every pound. H. A. FISH.

Plymouth Co., Mass., Oct. 3.

A Brief Report.

Poor season. Bees to feed. Not much honey. Not much money. Looking for a good season always to be better next year. Looking for a horseshoe and don't find it. Like Petrolenm V. Nasby's man—do better after to-morrow. J. V. B. HERRICK.

Hennepin Co., Minn., Sept. 28.

Bees Have Done Nicely.

We are having it rich this year. Every one's bees are doing nicely. I will give you a little idea how my bees are doing.

Honey taken off, Sept. 21, colony No. 9, 16 Langstroth frames, and one super on, all full, ready to be capt over; swarm from colony No. 1, 26 Langstroth frames; No. 6, 15 frames; No 5, 20 frames; No. 1, 29 frames; and No. 2, 20 frames.

A. E. Smith has bought Mrs. McGarvis' bees; she had 40 colonies, and he gave her

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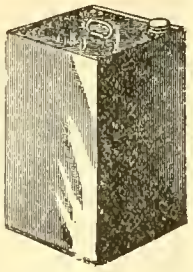

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300 pounds in sections, put up in shipping-cases, and all the honey that is ready to take off. This will make him 82 colonies. He said if we had two weeks more of nice weather we would get one more super full.

Posey Co., Ind., Sept. 25. IRA NYE.

Counted on Too Much.

I was counting on 10,000 to 12,000 pounds of honey, but it did not all rain down, altho I had the platter clean and the right side up; but I am thaukful for what I did get. Lots of honey-dew is coming in; it is bright and of pleasant flavor. I shall feed a little honey and sugar and risk it for winter stores. The bees are breeding like summer time. This I regret, but I cannot help it. S. T. PETTIT.

Elgin Co., Ont., Canada, Sept. 21.

One of the Clovers.

I send a few plants of some kind of clover, as I believe. Kindly say what it is, and whether it is of value as a honey-plant.

Pierce Co., Wash. G. C. BRITTON.

Prof. C. L. Walton, 2863 N. Ashland Ave., Chicago, Ill., botanist for the American Bee Journal, replies as follows:

The plant is a clover, Trifolium procumbens, but is not as good a honey-plant as some other clovers, such as the white, sweet and Alsike. While not so profitable to cultivate as other honey-plants, yet when growing wild it may afford good forage when other supply fails.—C. L. WALTON.

Liberal Amount of Fall Honey.

Since my last report I have secured quite a liberal amount of fall honey, mostly amber, from golden-rod and Spanish-needle, the marshes here being yellow with the latter during the latter part of August and first few days in September. The hives also are unusually heavy with stores, and the honey, I think, is of the best quality for wintering purposes. B. T. DAVENPORT.

Waushara Co., Wis., Sept. 23.

Hard Year for Vermont Bee-Keepers

This has been a hard year for Vermont bee-keepers. I started in the spring with 85 colonies, and now have 90. I secured only 1,500 pounds of honey, mostly extracted. Comb honey brings 20 cents as quick as one dollar will bring another. Bee-keepers who last year had 10 to 15 tons of honey have less than one now, and have to feed tons of sugar to winter the bees; and bees are not in good shape, the drouth having kept them from breeding, and so they are light in bees. M. F. CRAM.

Orange Co., Vt., Sept. 25.

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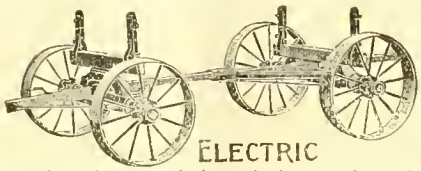

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Too Dry for Honey.

Bees have stored no honey here since July 15, on account of its being too dry.

G. W. FAGAN.

Arkansas Co., Ark., Sept. 20.

No Surplus and Must Feed.

I have taken no surplus this year, but have to feed a few of my colonies. Last year I had a surplus of 400 pounds from 5 colonies. This year I have 10 colonies and have to feed some. This is quite a difference. GUSTAVUS KOLLS.

Hall Co., Nebr., Sept. 25.

Bur-Marigold.

I send a specimen of plant that grows along the lake shore and swampy places, which I wish to have classified and also named. The bees work on it faithfully.

CHAS. LINDBERG.

Meeker Co., Minn., Sept. 28.

[The specimen is Bidens chrysanthemoides, a rather formidable name for such a modest flower. The common name is Bur-Marigold, and belongs to the great composite family. Prof. Cook says it is replete with precious nectar and makes the apiarist jubilant as he watches the bees flood the hives with the rich and precious honey.—(Bee Keeper's Guide)—C. L. WALTON.

Don't Worry About Salaries.

"What salaries are paid in different business callings is a question often askt by young men, and one which seems to enter into their deliberations as a qualifying factor as to whether they shall enter certain trades or professions," writes Edward Bok, in the September Ladies' Home Journal. "I never could quite see the point of this, nor the reason for it. What are the salaries which are paid to others, to you or to me? They signify nothing. If the highest salary paid to the foremost man in a certain profession is $10,000 a year, what does it prove or signify? There is no obstacle to some one's else going into that same profession and earning $25,000. The first step in going into business is to find out not which special line is most profitable, but which line you are most interested in and

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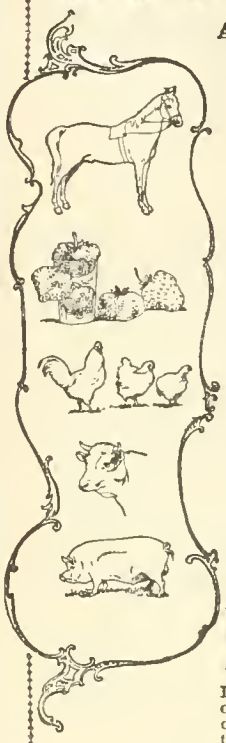

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are best fitted for. Then drive ahead, and the salary will take care of itself. When a young man thinks too much of his salary it is pretty good proof that he is not of very superior make. Ability commands income. But you must start with ability; not with salary."

Convention Notices.

Connecticut.—The Connecticut Bee-Keepers' Association will meet at the Capitol at Hartford, Wednesday, Nov. 8, 1899, at 10:30 a.m.
Waterbury, Conn. MRS. W. C. RILEY, Sec.

Illinois.—The annual meeting of the Northern Illinois Bee-Keepers' Association will be held at the Court House in Rockford, Ill., on Tuesday and Wednesday, Oct. 17 and 18, 1899. All are cordially invited. B. KENNEDY, Sec.
New Milford, Ill.

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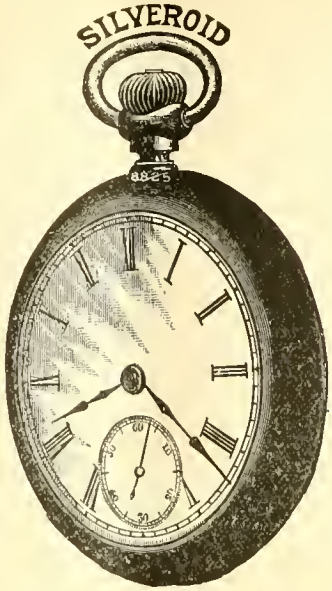

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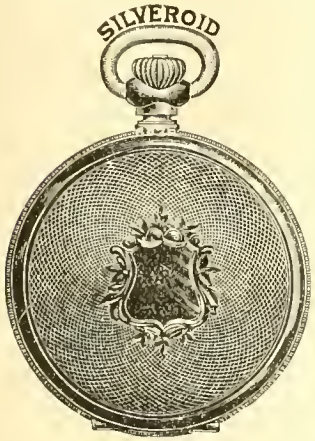

143

No. 146 is a Gentleman's genuine open face Elgin, Waltham, or Hampden, the movement nickel-finisht, compensation balance, straight line escapement, quick train, patent safety pinion, double brace main-spring, Breguet hair-spring. The Case is Silverine with screw front and back, and of good weight, thus making a perfect, dust-proof watch.

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No. 143 we will send prepaid, by express, to any address for $8.00; or we will give it free as a premium for sending us 16 new subscribers for the American Bee Journal for one year at $1.00 each; or we will club it with the Bee Journal for one year—both for only $7.50.

We believe we have never offered any premiums to our readers that we think will give the satisfaction that these watches will. They are not cheap "clocks," but really valuable watches that will wear well, run all right, and be worth much more than is paid for them. Here is a chance to make a gift to some boy, girl, young man or young lady. Everybody ought to have a good watch. Address,

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Send for Circular and see the prices on a full line of Supplies.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Sept. 20.—Fancy white comb honey brings 15c; No. 1, 13@14c; ambers, 10@12c; dark, 9@10c. Extracted, white, in cans, 7½@8c; in barrels, 7@7½c; amber, 6½@7c. Beeswax, 26c.

The receipts are increasing and sales are becoming more frequent. Shipments are coming to hand in good order, and when properly prepared will do so until we get zero weather, after which it is liable to crack, and break away from the frames. R. A. BURNETT & CO.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & CO.

NEW YORK, Sept. 20.—Fancy white, 15c; No 1, white, 13@14c; fancy amber, 11@12c; No. 1, amber, 10@11c; buckwheat, 9@10c. Beeswax dull at 25@26c.

Demand good for all kinds of comb honey, and ready sale. Extracted in good demand also, excepting buckwheat, at unchanged prices.
HILDRETH & SEGELKEN.

SAN FRANCISCO, Sept. 27.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾, light amber, 6½@7c. Beeswax, 26@27c.

Two shipments of extracted have gone forward to Europe since last issue, the ship Springburn carrying as part cargo 360 cases for London, and the ship Aristomene taking 100 cases for Liverpool. Market shows the same healthy tone as previously noted, with stocks of all descriptions of small volume.

ALBANY, Sept. 26.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & CO.
Successors to Chas. McCulloch & Co.

BOSTON, Sept. 21.—Fancy white comb, 1-pound sections, 16c; A No. 1, 14@15c; No. 1, 13@13½c; No. 2, 11@12c. White amber extracted, 8@8½c. Beeswax, 27c.

New comb honey is coming in very slowly, showing a general shortage all over the country.
BLAKE, SCOTT & LEE.

BUFFALO, Sept. 29.—There are virtually no arrivals of strictly fancy white comb honey. The very little arriving is poor, and the best of it brings 14 cents. We believe extra fancy would bring 15@16 cents, and any grade will sell well here. If receipts do not increase we may reasonably look for possibly higher prices. There is a very strong demand, quickly taking the few arrivals. BATTERSON & CO.

OMAHA, Aug. 16.—Still very little doing and receipts so light that a market price has really not been establisht. Little lots of choice new comb are still going at 14@15c, but a good many dealers will not touch it at these prices, and in order to place larger quantities at this time a considerably lower figure would have to be made. In the course of another month, when the weather is cooler and the taste for fruits more fully satisfied, the demand for honey will be more general and a more reliable market can be quoted. Extracted is slow sale at 7@7½c.
PEYCKE BROS.

DETROIT, Sept. 11. Honey-producers accustomed to selling in Detroit have hard work to satisfy local trade. Very little honey in market. White comb, 14@15c; dark, 12@13c. White extracted, 7½@8c. No dark wanted. Beeswax, 23@25c. M. H. HUNT & SON.

WANTED. Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER,
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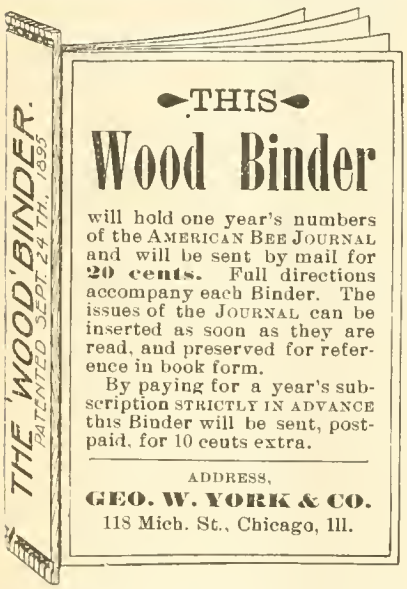

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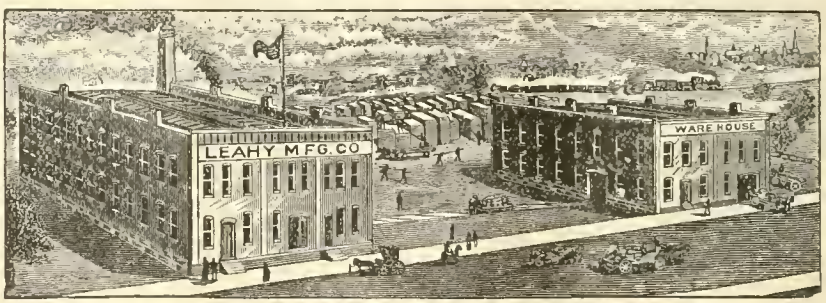

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HONEY JARS.

1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

CARTONS.

If you use these, send for a sample before buying.

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THE BEST, with silk face, 35 cents each; 5 for $1.50, postpaid. If not satisfactory, you can return.

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Please Mention the Bee Journal when writing Advertisers.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., OCTOBER 19, 1899. No. 42.

CONTRIBUTED ARTICLES

Apiary of Mr. Wm. McLennan, of Hamilton Co., O.

BY JOHN R. SCHMIDT.

The picture shown herewith is one of an apiary of 35 colonies, belonging to Mr. Wm. McLennan, of Hamilton Co., Ohio. The way in which he became interested in bee-culture is very singular, and as it was directly thru the American Bee Journal, I resolved to photograph the apiary, and send it, thinking it might interest the editor as well as his readers. This is how he became interested in bees, as he told me:

Several years ago his wife subscribed for the American Bee Journal. At that time no bees were kept by anyone in the family, but they just took the Bee Journal because they liked it.

One evening, Mr. McLennan finisht reading his evening newspaper, at an earlier hour than usual, and having nothing else to read he pickt up a copy of the American Bee Journal that was lying on the table. After several repetitions, this became the regular evening routine—newspaper first, Bee Journal afterwards.

After a short time he began to look forward to Thursday afternoon (the day upon which the American Bee Journal arrived), and on this day the Bee Journal was first and newspaper came afterwards.

About this time, the second stage of the fever began to appear. He wanted the bees, and it was not long until he had them.

Last year, Mr. McLennan bought up all the bees in the neighborhood that were for sale, and at present he is thinking about moving his bees out into the country and going into the business.

The person shown in the photograph is Mr. McLennan. The building to the right is a stable and barn, half of the upper story being used for a stock-room, where he keeps bee-hives, supers, sections, etc. The other half is used for a honey-room, where is kept all of his honey, safe from temptation and robber-bees.

Hamilton Co., Ohio.

Apiary of Mr. Wm. McLennan, of Hamilton Co., Ohio.

Feeding Bees for Needed Stores—It Pays.

BY C. P. DADANT.

MR. DADANT:—I thank you very much for your kindness in helping me out last June. My bees were near starvation, and I did not know what to do. I thought it would cost too much to feed them, so I askt you if you thought it would pay. You replied that you would feed them all they needed even if you had to borrow the money to do it. So I was encouraged, and bought the sugar for feeding, being about a barrel and a half, which supplied them until the harvest began.

My crop this year was 2,200 pounds of fine honey, while my neighbors, who keep as many colonies as I do, got very little from them, and some not a pound. One of them, who has kept bees for 15 years, had 30 colonies, spring count, did not feed, and he got only 3 swarms from the 30, and very little honey.

I had 27 colonies last spring, which I fed just as you directed, and I took off the 2,500 pounds of honey, and had 35 swarms, besides, which I think is pretty good for this year.

I began in 1893 with one colony, being 25 years of age. I have been successful ever since in wintering, not losing 3 colonies in the six years of my experience.

TOFIELD LEHMAN.

Fayette Co., Iowa.

I can but congratulate Mr. Lehman on his perseverance, and I am glad to be able to record that our advice is not lost, and that we are not the only ones who succeed by

helping the bees to the last. If the reader will refer to page 404, in the American Bee Journal for June 29, he will see how the matter stood.

Feeding pays when absolutely needed to save the colony, and no one should hesitate if he wishes to succeed. As the present season has been one of poor crop in many localities, it is quite likely that a number of colonies are now without sufficient stores for a safe wintering. This should not be permitted to remain thus. They should be fed bountifully, and, I dare say, it is as sure to pay in the long run as the feeding above mentioned paid Mr. Lehman.

I have just read Mr. France's article, on page 606, and I wish to emphasize these words of his: "If you want to winter bees out-of-doors give them a large hive, and a good deal too much honey is just enough." If your bees are short of stores for winter, I would hardly advise you to give them "a good deal too much," but be sure and give them plenty. It does not pay to let bees starve because of a bad season. but it pays still less to feed them stingily, and have them starve after all. So give them all they need. But if you have had a good crop do not stint the bees, leave them "a good deal too much," as Mr. France says. It is this kind of bee-keeping that secures the honey crops for the millions.

If your colonies are strong in bees and poor in honey, it is of no use to induce them to breed to any extent, therefore the feed should be given all at one time, or as nearly at one time as is practicable. Warm feed, given above the brood in Hill feeders or ordinary fruit-can feeders, covered with a cloth and inverted over the cluster, may be fed very rapidly to a strong colony. We always invert the feeder previously over a dish or pan, so that the first flow may come and the atmospheric pressure prevents further sudden leakage. We have thus given 15 pounds of honey to one colony at one feed. We put it on the hive in the evening, when there is the least danger from robber-bees. If honey is not to be had readily, we use mostly sugar syrup, but always mix a third of honey with it.

Colonies which are not very strong in bees may be fed more slowly. While they are taking the food they will breed more or less, and this will serve to strengthen the colony for winter. Weak colonies that do not cover the greater part of their combs would best be warmly covered, or put into the cellar, at the opening of cold weather; and if there is no objection to decreasing the number of colonies of bees, it may be well to unite two or three into one. In this case, the best queen should be retained, and the bees put together, at the same time sprinkling them with sugar syrup. In order more easily to cause them to unite, some apiarists scent the syrup with some strong perfume, such as essence of peppermint, which gives all the bees the same odor, for it is well known that bees recognize each other by the sense of smell, each colony having its own peculiar scent. The sweet food puts them in good humor, and the peppermint prevents them from noticing much difference between the odor of their neighbors and their own. If robbers are kept away, no trouble need be anticipated. The only objectionable feature to uniting bees from different hives into one is the returning of some of the old bees to the former spot, which is almost unavoidable, tho if they are drummed and frightened enough to cause them to consider themselves in a swarming condition, they will usually recognize the new spot readily.

In an apiary where the hives are all of the same pattern—as there are usually some rich colonies even in the poorest seasons these may be caused to help the others by taking from them whatever they may be able to spare out of their brood department. But it takes a little discernment to do this feeding properly. If you give a weak colony a heavy comb of honey on one side of its cluster, this honey may be too remote from the cluster to be of use to them. It is necessary to examine the hive and put the additional feed in an accessible place, often spreading the thinly supplied combs apart, to place the heavy combs in the center. But these must not be too full. A solid comb of honey would practically split the colony in two, and might prove injurious, for the bees need empty cells on which to cluster, the cells of honey being much colder, and therefore less advantageous to the cluster.

Is it necessary to state here how much honey is needed to winter a colony safely? The amount has been variously given by different apiarists according to the circumstances in which their bees were placed, at from 8 to 40 pounds. A good, middle average is 25 pounds. A colony which has access to about this amount of honey is in good condition for winter. It may consume more in spring breeding, but this may be added after winter, without trouble.

"That Big Nuisance"—The Alley Trap.

BY HENRY ALLEY.

SOME one has taken the trouble to inform the readers of this paper that the Alley queen-trap is a nuisance in the apiary. It seems to me it is rather late in the day for any one to make such a discovery, as the trap has been in use some 18 years, and has been praised on all sides by those who have them in use. The trap can be found in all countries where an interest is taken in apiculture.

Suppose a little pollen, say one percent of all the bees collect (and it is not more than that amount), is brusht off the legs of the bees when they pass thru the metal, does any one have an idea that that would in any way affect the prosperity of the colony? The person who asserts that the trap is "a nuisance" most likely is one of those bee-keepers who has not been long in the business, as it seems to me he would not now attempt to discuss the merits of the trap, as these same charges, years ago, were brought against it, and no one took any stock in them; and I do not believe they will now.

By actual test, hives side by side in an apiary, those colonies in the hives on which were traps stored more honey than those that had no traps. The above test was made by a man whose apiary is in Georgia, and the facts were given to the public years ago. All who have tested the trap have found it one of the greatest labor-saving devices ever used in the apiary.

Yet I have no doubt there are people who think it is much better and easier to climb into a tree, 30 or more feet high, on a hot day—say on a day when the temperature is 90 degrees in the shade—for a swarm of bees, rather than just sit down and see a swarm of bees hive themselves. I like the latter method much the best.

If bees would not swarm, or, if the pesky things when they do swarm, would only settle in a convenient place where they could be hived with as little trouble as they can be when the trap is used; or, if the bees would not swarm when a fellow is away from home, and not expecting anything of the kind, and slip to the woods; and, what is still another bad thing, not rear so many useless drones, the trap could be dispenst with just as well as not.

Now, to pit against all the above-mentioned advantages is the claim that a little of the pollen is knockt off as the bees pass thru the metal into the hive. So far as saying bees do not store as much honey when the trap is used, as colonies do that do not have the trap, that is mere guesswork.

I could say much more of the advantages of the trap, but I think the above is all that is needed.

Essex Co., Mass.

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 629.]

SECOND DAY—Forenoon Session.

The forenoon session of the second day, Sept. 6, was called to order by Pres. Whitcomb, after which Rev. E. T. Abbott offered prayer.

A communication from the Farmers' National Congress, to meet in Boston, Mass., stating that our Association was entitled to a delegate, was read by the secretary, and it was voted to send Mr. E. A. Wander, of Connecticut, as such delegate.

On motion, the chairman appointed as a committee on resolutions, Hon. Eugene Secor, Ernest R. Root and George W. York.

On motion, it was decided to hold the election of officers for the coming year as near 3 o'clock in the afternoon as possible.

Hon. E. Whitcomb, of Nebraska, then delivered the following

President's Annual Address.

Once again we have assembled from the West, North and the South in this beautiful City of Brotherly Love, in which American freedom began its flight. In the years that have rolled along, the busy bee has kept pace with the iron horse in her course toward the Western sunset, and to-day she gathers sweet nectar from the flowers that bloom from every hillside, valley, glen, and far out on the prairies, and the breezes are wafted to the home of the honey-bee from the shores of the Atlantic, the broad Pacific, and from the Gulf.

NOT A PROSPEROUS YEAR.

The year now rapidly drawing to a close has not been a prosperous one for our chosen avocation, and while a few of us have a goodly supply of the products of the apiary, the great majority are compelled to report rather light results. Following an unusually rigorous winter, a spring wet and cold, with a warm, dry summer, there is little else to expect save the complaint of light stores.

FOUL BROOD.

It is said that opportunities of some kind present themselves once in a lifetime to every man—to this, woman might be added—and to us the subject of foul brood has been the all-absorbing topic during the past season. While this disease has been thoroly discust pro and con, yet when one comes to tackle it, or to have it attack him, it is quite another phase of the argument. In my experience with foul brood this season I have learned that it readily yields to the treatment in which the colony is, compelled to use what stores they have in their sacs for comb-building, and that it is not necessary to destroy either hive, frames, or wax, as these may be so easily and thoroly renovated of all traces of this disease that in no case has it appeared in the apiary a second time after treatment.

RELATION OF BEES TO FLOWERING PLANTS.

The relation of the honey-bee to flowering plants is a subject of importance. Experiments made by the Government show the benefits of a thoro cross-fertilization of plants, especially of their own species. In-breeding was for a divine purpose forbidden, and in no case is this sooner to be observed than in plants and fruits. An All-Wise designer placed the nectar beneath the blossom for the sole purpose of attracting the honey and pollen gatherer thither for the purpose of cross-fertilization. Nearly all of our fruit blossoms are hermaphrodite—they carry both sexes within themselves—yet a great many are utterly incapable of self-fertilization, as in the apple, cherry, strawberry, and hundreds of others which I might name. In the strawberry, in order to produce a perfect fruit will require the separate fertilization of from one to three hundred, and the dark-green masses to be found in almost any dish of strawberries are only evidences of imperfect fertilization. In the raspberry and blackberry every little rounded mass has required the visitation of an insect in order for fertilization.

The need of bee-keepers is to get into closer touch with the horticulturist, to convince him that we are his friends, and that when our bees visit his orchard and vines, not only we but he receives a benefit directly therefrom. The experience of Senator G. W. Swink, of Otero Co., Colo., as stated at an informal reception given in the Apiary Building at Omaha, is in itself a whole chapter in favor of the honey-bee as a fertilizer of both fruit and flower.

In stating his case at that meeting, the Senator said that as he engaged in the business of melon-growing on the Arkansas, the crop was unsatisfactory. No blossoms that came prior to the little prairie sweet-bee produced fruit, the crop was late, the melons deformed. A friend suggested that the trouble was in fertilization, and advised the honey-bee as a remedy. Advertisements were inserted in Kansas papers offering a free location, and free board, to the party who would locate an apiary in Swink's melon-fields, and when I inquired the result, he said, "Why, more than four times the melons;" and now are located in those vast melon-fields more than 600 colonies of bees, and the famous Rocky Ford melons are to be found in every Western market. They fed the vast throng of people that visited the Trans-Mississippi for nearly a week last fall, including the bee-keepers of the United States Bee-Keepers' Association, who were present on that occasion, while the Indians lugged melons and danced until this Association was really in danger of being contaminated with the effects of the festive dance.

ADULTERATION.

Nothing that we have to deal with meets us so squarely in the face at this time as adulteration. Years ago Senator Paddock, of my State (Nebraska), took up the matter of enacting pure-food laws, but the adulterators rallied to its defeat in such numbers that it failed to pass. Congress has again taken up that question, and placed Senator Mason at the head of a committee whose duties are to make such investigations as are possible, and to report such laws as will best meet the cases in question. In a correspondence with Senator Mason I have pledged him the undivided support of 5,000,000 bee-keepers, and he assures me that of all the abuses honey appears to have suffered the most, and that it shall have a prominent position in the Bill which his committee is to report to the next Congress.

When I pledged him these 5,000,000 bee-keepers of the United States in support of a pure-food law, I realized fully what benefits such a law would bring to these producers, and would extend to perhaps 50,000,000 consumers. In order to make this support felt, we must ask our senators and representatives in Congress to support this measure; we must unite ourselves to the organization that will enforce such a law when enacted, and stand by it to the end.

The opportunity now presents itself for this Association to make its influence felt in this direction, but in order to do so there must be a unity of action, a banding together with this one idea of success. Differences must be dropt, especially so far as they relate to small things, and to gain this much-desired end it matters not whether honey is best South, East or West. The bee-keepers of the United States are confronted with an army of adulterators who are gradually bringing the product of the apiary into disrepute, and lessening the demand even for a pure article, for the reason that suspicion is being cast on every grade, and in many localities it is even asserted that comb honey is subject to adulteration. These mistaken ideas come mainly from the adulterators themselves, who desire to induce the public to believe that they are as good as the very best.

ADULTERATORS OF HONEY.

The suits instituted against the adulterators of honey at Chicago, under the pure-food laws of Illinois, have proven a failure from the fact that the law allowed the venders to plead that they were not aware of the adulteration. The gun that isn't loaded is the most dangerous of all, and the bee-keepers of the United States will be compelled to rely upon national legislation rather than State laws in order to clean up this great army of adulterators who prey on the unsuspecting, and, when confronted in their nefarious work, hide behind some clause in the law to escape punishment by pleading ignorance. Prof. Eaton, who has analyzed several samples of adulterated honey at Chicago, states that out of the number analyzed but three were found to be pure, and the one upon which an action was based contained glucose almost entirely; not sufficient honey being used for flavoring. The law, remarkt Mr. Eaton, is about as good as no law at all, and when "ignorance is bliss" while engaged in vending beeless honey made from a cheap sample of glucose, dangerous to health, one of the most honorable and healthgiving industries of the United States must suffer. The experience with these adulterators should nerve the bee-keepers of the United States with a renewed determination to stand together until these abuses are stampt out, once for all.

THE BENEFIT OF DEFEAT.

There will doubtless grow out of failure some real benefits to the honey producer, inasmuch as all adulterators will fully understand that there are lurking in the woods and on the watch-towers those who are looking after their nefarious practices in deceiving the public, and who seized on the first opportunity to prosecute them. This will make them a little more cautious, and more samples will be branded with what they really contain, and more honey will be used in compounding adulteration. This is possibly worth to the Association all that it has cost, if not more.

THE UNITED STATES BEE-KEEPERS' ASSOCIATION.

This Association is not strong enough to have its influence felt as it should be felt. Memberships mean dollars, and dollars mean that which with your outside influence can and will be felt all along the line from Maine to Oregon, and from the Gulf away up into the British possessions. Every member of this Association ought to constitute himself a committee to secure the membership of his neighbors and fellow bee-keepers, until every live, wide-

awake man who manipulates the bee has been gathered in and is a member of this Association.

AMALGAMATION AND COMMENDATION.

There has perhaps never been room for more than one national association of bee-keepers, and this Association was organized at Lincoln, Nebr., with a view of uniting the whole in one strong association. But for reasons not necessary to state, there were differences which grew wider apart for a time, and the object for which this organization was formed in part has failed. I am happy to state that these differences are fast being dissolved, and that we are looking forward to the time when the two great organizations will be able to unite for the general good of both, and on a more elevated plan for bee-keepers, and the punishment of adulterators secured under such laws as have been past in the different States and such laws as may hereafter be past.

I take great pleasure in commending to your consideration the zeal and fidelity with which General Manager Secor has filled his office in this Association, not only during previous years, but during the present one. Secretary Mason, by his careful painstaking, and general courtesy, ever alert for the best interests of this Association, is entitled to a liberal share of your commendation, and I assure you that there is little else to be gotton out of the labors which have been performed by them, as well as the different members of the Board of Directors, who are likewise entitled to your commendation.

During the year Rev. E. T. Abbott has taken great interest in the National Pure-Food Congress, and has spent much time in attendance on the sessions of that organization,and with little expense to this Association. I doubt not but thru his efforts this Association has a standing among the advocates of pure food second to none in the United States. Our thanks are due the different members of the Board of Directors whose universal courtesy has been ever foremost in advancing the best interests of this Association.

E. WHITCOMB.

The president's address was followed by the following paper by Rev. E. T. Abbott, of Missouri, entitled,

Necessity of Pure-Food Legislation from a Bee-Keeper's Point of View.

I come to you this morning all the way from the Queen City of the West to talk to you about a subject in which I am vitally interested, and I trust I find you in a receptive frame of mind, to say the least, if not fully aroused to the importance of the subject.

Perhaps it is not just the thing to discuss the manner of stating a subject when it is given you by another, but I want to enter a protest against discussing pure food from the "stand-point" of any class. There may be special reasons why we, as bee-keepers, should throw our influence in favor of all such legislation, but all pure-food legislation should have in view the interests of the masses, and not the lowering or raising of prices for the benefit of special classes. It is the interests of the consumers that are to be lookt after, and not those of the producers.

What we need is one national pure-food law which will cover all articles of human consumption for food and medicine. Perhaps it would be just as well to say human and animal consumption. The trouble with pure-food legislation in this country has generally been that those engaged in special industries have sought to have laws past for their personal benefit, and the reason urged, in many cases, for the passage of such laws has been that it would protect and raise the price of the product in which they are most interested. It is probably not necessary for me to say that I am opposed to all such legislation. It is vicious and contrary to the principles of a free government. Fairchild, in his Moral Philosophy, says: "A tyranny is a government which is administered for the pleasure or advantage of a class or of a few in opposition to the interests of the many." This is true of any law, whether it help a rich corporation or the so-called "granger."

The tendency to take narrow views of such legislation is so great that many find it hard to resist it. Two elements make themselves prominent. Our selfish interests so press themselves on our brain fiber that we find it hard to resist the temptation to ask that the legislation be so framed as to help *our* industry. Then, again, egotism is so prominent in our natures that we are apt to think that nothing is just as it should be until we have had a hand in making it. The result is we can see no good in a Bill framed by others, first, because it does not help "our folks," and second, because we had no hand in making it. As John Stuart Mill suggests, we are apt to want men to act as we think they should, because of our personal feelings in the matter, and not because it will promote the public good.

The necessity for pure-food legislation is hardly a matter for discussion. Every man of ordinary intelligence, who has given the subject a moment's thought, knows that adulteration and false branding is rampant everywhere. Butter is adulterated, flour is adulterated, sugar is adulterated, tea and coffee are adulterated, honey, thrown out of the comb, is adulterated, spices are adulterated, syrups are adulterated, drugs and medicines are adulterated. In fact, almost everything we eat and drink is adulterated. Sometimes even the adulterant is adulterated. Chicory is a good illustration of this, for the man who buys it to adulterate coffee is not certain that he himself is not being woefully imposed upon by having some adulterant of the adulterant foisted upon him. In this case he gets beaten at his own game. Here is a list of the articles which are said to be used to adulterate chicory. (Before I give the list let me remark that this Government has laid a duty on chicory so the people of Nebraska can afford to raise chicory): "Roasted beans, peas, carrots, parsnips, acorns, horse-chestnuts, tan-bark, logwood, and even the livers of animals." And so it comes to pass,

> "Larger fleas have lesser fleas upon their backs to bite 'em,
> And these, again, have smaller fleas, and so ad infinitum."

Adulteration is open, flagrant, bold, and often *defiant*. It is the crowning crime and shame of the 19th century, and a matter beside which in importance all others pale into insignificance. It is more than expansion or anti-expansion; it is more than free silver or the gold standard; nay, it is more than any other question which confronts the American people to-day, for it is sapping the moral foundations of justice and equity, and teaching men and women, who are otherwise disposed to be fair, to wink at deception and dishonesty. Surely, it is time to call a halt.

I am a firm believer in the rights of the individual, and insist that none of his natural rights be curtailed or arbitrarily taken away in the supposed interest of society, but I am equally firm in the conviction that no man has a right to defraud and deceive his fellow men in the name of liberty. Cooley said, "It was the peculiar excellency of the common law of England that it recognized the worth, and sought especially to protect the rights and privileges, of the individual man. Arbitrary power and uncontrolled authority were not recognized in its principles." Legislators should ever have these foundation principles in mind, and should see to it that no individual right is infringed upon by the laws which they enact. So long as an article is not injurious to human health and happiness, the laws of the land should in no way interfere with its manufacture. The simple fact that the production of an article lowers the price of or cheapens another article is not a sufficient reason for throwing legislative restrictions about it. We were told a few years ago that a "cheap coat" made a "cheap man," but surely this is not true of food products. The masses are interested in cheap foods, and the only thing that I insist upon is that they be sold for what they are, and be not branded with a *lie*.

Much of the so-called pure-food legislation of the past has simply been a little "pap" thrown by the cheap-John politicians to the so-called "grangers" to catch votes, and the result has been that in many of the States some very foolish laws have been enacted, professedly in the interest of pure food, but actually in the interest of the party who introduced the Bill. The farmers were blandly told that they were entitled to higher prices, and that the so-called pure-food law would enable them to get them, and they were thus deluded into shouting and voting for the fellow who threw them this very thin "pap." Jefferson wrote in 1789, "The tyranny of the legislatures is the most formidable dread at present, and will be for many years." In the light of the acts of this, the year of 1899, we can see that he was clearly correct.

Take the pure-food law of Illinois as an illustration, and some of these incongruities will make themselves apparent. The Food Commissioner, a creation of the last legislature, is to have for his duty the enforcement of the laws now existing, or that may hereafter be enacted, regarding the production, manufacture and sale of dairy products or the adulteration of any article of food. Are not dairy products "articles of food?" If so, why place them in contrast with all other articles of food? Self interest! Here is the hand of some one who has more interest in one class of producers than in all other producers and consumers combined.

A similar so-called pure-food law was past in the State

of Missouri, which makes it a criminal offence to sell any article intended for human food which contains arsenic, calomel, bismuth, ammonia or alum—a very good law, perhaps, if it had not been in the interest of some one's baking-powder. The same legislature let a duplicate of the Brosius pure-food law die in the hands of a committee. Why did not the Illinois law specify honey or apiarian products? Simply because the politicians have not felt the necessity of throwing taffy to the honey-producers as a class.

Let us away with this kind of nonsense; let us have done with this political jobbery; let us enact a national pure-food law in the interest of the consumer, and not for the benefit of any class of producers, let them be few or many. Let us as a nation declare that it is a crime to adulterate, to falsely brand, to sell anything for what it is not. If this lowers prices, let them go down. If it raises prices, let them go up. Any business that cannot live in the face of honest competition deserves to die. The honey-producer has nothing to fear from the competition of any article or compound that is sold for what it is, and does not carry a lie on its face. There is great need for education along this line. The moral sense of mankind must be awakened, and they must be made to feel that to knowingly sell falsely-branded or adulterated goods is to commit a crime, morally if not legally. I have here an illustration of such criminal work in the shape of a jar of so-called honey. It is labeled "Kellogg's Pure White Clover Honey, Medina, O."

I remonstrated with a dealer in our city about selling adulterated honey. He said it was nothing to him, that he would sell a man mud if he wanted it. I said, "So would I, but I would not sell him mud when he askt for honey," neither would I sell him two parts glucose and one of honey which some unscrupulous mixers had labeled "Kellogg's Pure Clover Honey," for *honey*; for it is not honey, and the man who labeled it honey knew the label was a lie when he put it on, if he ever thought enough about what constitutes a lie to understand the real facts in the case. To take a man's money for a mixture of glucose and honey when he asks for *honey* is obtaining money under false pretenses just as much as it is to give a check on a bank when one never had any money deposited there. They send men to the penitentiary for the latter; why should not the same penalty be inflicted for the former crime? Will some honest (?) mixer please rise up and explain?

There seems to me but one way to get at the root of this evil, and that is by a national law making it a criminal offence to adulterate or misbrand any food or drug in any territory of the United States and the District of Columbia for interstate commerce or exportation, and then let each State pass a law of the same kind to reach the cases within its own borders. Of course, you understand that the United States cannot regulate the manipulation and sale of food and drug products in the various States of the Union, but it can control the matter in territories for interstate commerce, and when the goods are intended for a foreign market.

Now, what are the prospects of such national legislation as I have suggested? I may say, in a word, that the outlook for the passage of such a law is very good indeed, and the most important thing for us as bee-keepers and citizens of the United States is to see to it that our influence goes to help forward the work of securing the enactment of such a law, and that we do not waste any of our energies on side-issues gotten up to promote the political interests of some individual.

During the summer I have noticed a good deal said about Senator Mason and his pure-food committee. The Senator was reported to have said that great pressure was being brought to bear on him to get him to stop his investigations, etc. Now, I want to say just here, that I have not been quite sure that I knew why those investigations were instituted, or where Senator Mason got the idea that there would not be any Pure-Food Bill past by the next Congress unless he drafted one and pusht it thru. What is the use of wasting time and the people's money to prove the fact of adulteration? Why was it necessary to take Prof. Wiley, the United States chemist, half way across the continent to tell a committee what he knew about food adulteration? He had long before told all he needed to tell on the subject before an intelligent congress of some of the best citizens of the country, which congress met in the national capital, and whose proceedings had been publisht and were accessible to Senator Mason or anybody else. Why should the work of this body be ignored and a political junketing committee be created to prove the fact that food is adulterated? It is like spending money to prove the fact that the sun shines, or that water does not naturally run uphill. Everybody who has given the subject a moment's thought knows that food and drugs are openly and wickedly adulterated, and the evidence of it can be found in any village or city of the United States. The main thing now is, to find a way to stop it, and I think this way will be found, even tho Senator Mason should stop his fight in order that his son might draw the fat salary that one of the Chicago papers said he had been offered.

We do not need any new evidence, we do not need any new Bill, we only need that every lover of truth and common honesty go to work and see to it that the Pure-Food Bill which has the endorsement of the National Pure Food and Drug Congress, and which is known as the "Brosius Bill," becomes a law during the session of the next Congress. This Bill has the endorsement of some of the best men in the Nation, was carefully considered by the Pure-Food Congress Committee, of which I had the honor to be a member, and was then endorst by the Congress as a whole, and I do not think there is anything to be gained by side-tracking all of this work in the interest of any man's political aspirations, let him be Democrat, Republican, Populist, or what-not.

I fully agree with Senator Cockrell, who said, when I suggested to him that possibly the Bill contained some crudities and objectionable features, "I am in favor of the Bill. Let us pass it, and make the corrections afterward." Our enemies would like to see us wrangle over amendments until the Bill is killed, but I very much mistake the temper of the men who compose the National Pure Food and Drug Congress, if there is any wrangling about the matter. These men are too much in earnest to split hairs about minor matters; once we get the law then we will make the corrections.

Now, I want to say a word to the members of the United States Bee-Keepers' Association and to the public generally about making this a personal matter. You may think you have no interest in the matter, but you have. Adulteration reaches every home, it blights and withers the prospects of every honest calling, and is no respecter of persons. As I said before, it is sapping the foundation principles of moral order, and every man, woman and child who believes in common honesty is interested in its suppression. Even the families of the adulterators themselves cannot escape the ruinous effects of this the crowning crime of the century. Let us remember then, to use the language of Mill, "A person may cause evil to others not only by his actions but by his inaction, and in either case he is justly accountable to them for the injury."

EMERSON TAYLOR ABBOTT.

Pres. Whitcomb's address and Mr. Abbott's paper were then discust.

Mr. Abbott—Honey is two cents higher in Ohio than in Missouri. This honey, or imitation of honey, that I referred to in my paper, is made in Kansas City, Mo.

Question—Then do you mean to say that this honey is not put up by Root? (Laughter.)

Mr. Abbott—Some people are laboring under a mistake, and that is, that the United States has nothing to do with regulating foods. Congress cannot enact a law to prevent adulteration in Missouri, but as soon as the adulterated article moves out of the State then it can be handled. By the way, I have here copies of the Brosius Pure-Food Bill. I wish you would come forward and get them later. I wish I could speak to all the bee-keepers of the United States about this Bill. You may think that you have nothing to do with it, but you have. Adulteration reaches in every part of the United States.

Dr. Miller—There are thousands of people who have not given the matter a thought, The Pure-Food Congress has brought the matter before us. One point: I want a law made that will protect the market at Marengo. If I should make an effort to get legislation that will benefit only *me*, it will never be done. If we get anything done it will not be by legislation for any one point, but it will be when we get legislation that will benefit *every one*.

E. R. Root—It seems to me that there is not very much to be said about Mr. Abbott's paper, but I want to say that I endorse what Dr. Miller says, and I am interested in this bottle of honey. "Your sins *will* find you out." You know the city where this bottle of adulterated honey was put up, Mr. Abbott? Do you wish to give the name of the party?

Mr. Abbott—Bliss Company.

Mr. Root—Can you prove unquestionably that the Bliss Company put this up?

Mr. Abbott—I can.

Mr. Root—Why do they put Medina on it?

Mr. Abbott—I suppose they take the view that Medina is a honey center. Like all ignorant persons, they copy some one that they think is worth copying.

Mr. Root—I suspect that they were borrowing the comb-honey idea from comb foundation being made at Medina. But if there is any law in the country by which that firm can be prosecuted, and the stigma taken from the Root Co., we will follow it up.

Mr. Abbott—I owe a little explanation. The Pure-Food Bill was initiated by Senator Paddock. Mr. Brosius then talkt it up, and that is why it takes his name, and this Bill was drafted and prepared and turned over to the Senate. The House committee was ready to report favorably on the Bill. If you urge any other Bill you are not standing by the original Bill. If we ask for too much we will not get anything. We are going to pass this Bill without amendments. I have no objection to Senator Mason passing a Bill, but Senator Mason's Bill will not be a Pure-Food Bill. We say, pass the Brosius Bill. I will answer any question that anybody wants to ask. Go home and talk to your congressmen. I interviewed Mr. Cockrell about the Pure-Food Bill. He had never read it. I said, "These people are in favor of this Bill, and if you are not in favor of it off comes your head." I heard from him the next day, and he was in favor of it.

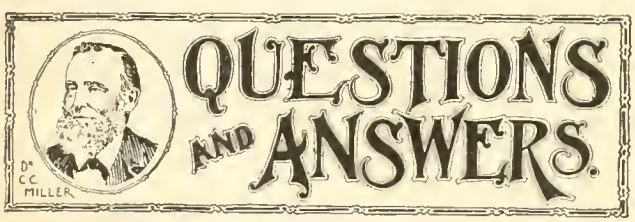
Dr. Mason—I would like to emphasize what Mr. Abbott says about waking up our congressmen. I went to our congressman and told him what we wanted, and he promist to support the Brosius Bill.

An Attendant—Probably he was a small man and was afraid.

Dr. Mason—He *was* a small man, but not afraid. He understands that his constituents are the "power behind the throne." He was already in favor of the Bill, but what I said encouraged him in its support.

Mr. Selser—I want to say that we have a pure-food law in this State (Pa.), and a good one. I don't know just the year in which it was past, but four or five years ago.

[Continued next week.]



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Losing Young Queens in a House-Apiary.

In reply to J. N. Alexander, page 622, I may suggest that his trouble in losing young queens in his house-apiary may arise from having a dozen entrances on one side of the building; many of them looking just alike. If he paints the side of the building in different colors, some white and some very dark, it will help. If, instead of having the entrances regularly two feet apart, he should put the entrances in pairs, say two entrances only six inches apart, then a distance of 3 feet 6 inches, then 6 inches, and so on, that would help. No danger that there would be confusion with two entrances only 6 inches apart, if there are only two entrances, for bees know right from left. It will be very helpful to plant a tree not far from the building midway of its length; even a post or a board would help. C. C. MILLER.

Arranging Hives in the Cellar.

I read of tiering hives in cellar-wintering. Does that mean placing one hive directly on top of another, or are they on shelves one above another? In other words, is it necessary to have them so as to remove the covers, giving access to the top of the brood-frames for examination?

PENNSYLVANIA.

ANSWER.—No, probably no one tiers up his hives in the cellar and still has a chance to remove the cover from each hive in the pile. Probably very few use anything like shelves. It would take a good deal of room with no corresponding advantage. One disadvantage would be that any jar to affect a single hive would jar every hive on the shelf. I suspect that even the uneasy buzzing of a colony might be communicated to the other colonies on the shelf, not at all to their advantage. Some tier up their hives in the cellar without any bottom-boards. The hives next the ground are raised so there is a large open space under them, and they are sufficiently wide apart so the next tier can be properly piled on them. Each hive of the second tier rests on two hives of the first tier, one side of the hive resting on one hive and the other side on another. The space between the hives is so large that nearly all the underpart of the hive is entirely open, giving unlimited lower ventilation. Another way is to have deep bottom-boards which leave a space of two inches under the bottom-bars. A hive is raised a short distance from the bottom of the cellar, on this is placed another directly over it, and so on till four or five hives are in the pile. Each pile is entirely separate from the other piles, so that if one hive is jarred it can only jar three or four others. After trying this last plan for a number of years I like it much. The hives are pickt up from their summer stands and carried in, bottoms and all, and the same thing when they are carried out.

Supers on First Swarms—Fall Management, Etc.

1. Is it advisable to place supers on swarms the first summer? If so, at what time should it be done?

2. When the queen has moved into the extracting-super and turned it into a brood-chamber, what should be done in the fall about extracting?

3. I have noticed on some leaning hives that an oily or greasy substance exuded from the lower corner. What does that indicate? UTAH.

ANSWERS.—1. Most surely it is desirable to put supers on swarms the first summer. If your bees swarm as much as some bees do, the main part of your surplus will be from the swarms of the current season. Indeed, a great many depend almost entirely upon these, counting that the mother colony will do well enough if it builds up strong for winter. The swarm is placed on the old stand, the mother colony close beside it, the latter being removed to a new stand six or seven days later. That throws *all* the storing-bees into the swarm, leaving the mother colony weak.

2. It isn't so much what is to done as what is not to be done. And the chief thing in such a case is *not* to leave the colony without abundant stores for winter. The thing to be done is to get into one chamber all the frames with brood, and the temptation in that case is to take too many of the combs for extracting. That's on the supposition that the frames in the extracting-super are of the same size as those in the brood-chamber. If the frames in the super differ in size from those in the brood-chamber, see that the queen is in the brood-chamber, and then put a queen-excluder between the two, thus making sure that within three weeks, at least, there will be no brood in the extracting-story. The better plan is to have the excluder there all thru the summer, then there will be no danger that the queen will get out of her proper realm.

3. I don't know, unless it might be pitch from the pine wood of the hives, or perhaps more likely the bees of the colony are great on bee-glue, and the overplus runs out on hot days.

Preparing Bees for Cellaring—Queen Questions—Queenless Colony.

1. Heretofore, in putting my bees into the cellar, I have stopt them up carefully so that they could not get out while being removed, then when they were all in and became quiet, I pulled the stopping out and quietly raised the front of the hive about an inch. Now comes A. I. Root and recommends lifting off the bottoms and putting them on scantling. I have never tried the plan, but would they not in lifting them off the bottom-boards and then putting them back in the spring in each case, arouse the bees up and cause them to fly out, and get scattered and many of them lost?

2. I have in the past kept empty supers on my hives in winter, partly filled with old cloths. Would they do as well to put the cover right on the body of the hive without the super? Would they not be likely to accumulate moisture

in the hive in that case? I don't like to experiment, but would rather profit by the experience of others.

3. Would it be safe to destroy all queen-cells on the eighth day after casting a swarm and insure a queen?

4. Is the piping heard before a second or after-swarm issues, done by a hatcht queen or an unhatcht one?

5. I have a colony that is queenless and has been so for over a month, and has a laying worker. If I unite it with another colony would they be liable to destroy its queen? It is not very strong with bees. I have thought of shaking its bees out upon the ground and let them look out for themselves, as all my other colonies seem strong enough without them. Would you think it the proper thing? IOWA.

ANSWERS.—1. There is not such a great deal to choose between the two plans. The objection to your plan is that the bees are stirred up and excited with the shutting in and the jarring, and it is better to leave them quiet after their last flight. If no pains are taken beforehand to raise the hives from the bottom-boards, the Root plan will find bees on the bottom-board with strong colonies. If the hives are raised beforehand, and left raised long enough, the bees will all be off the bottom-board in the hive. If the bees are quietly carried in there is no need of shutting them in the hive. My hive bottom-boards are two inches deep, so the hive is closed at the back and sides, with an entrance two inches deep the full width of the hive. The bees are carried into the cellar without shutting in, preferably on a cool day only a day or so after they have had a flight, and there is no trouble about their leaving the hive.

2. It may be that they will do a little better with the cloths if you don't object to the trouble.

3. No; there might be no queen out of the cell till after the eighth day. It would be safe to destroy all cells after you hear piping.

4. When the first young queen emerges, she travels about over the combs piping at intervals, making a rather shrill sound easily distinguisht from the other noises in the hive. In reply the queens yet in their cells emit a coarser sound, seemingly more hurried in their utterances. This last is called "quahking," altho it is also called piping.

5. It is now known that not merely one laying worker is engaged in mischief, but a large number in the same hive. If you unite a colony having laying workers with one having a queen, there is no especial danger that the queen will be injured. It matters little what you do with the bees of a weak colony having laying workers. They are old, and if united with another colony will hardly live thru the winter. It might be economy to have them die now, rather than to consume part of the winter stores before dying.

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

LEVELING DOWN BAIT-SECTIONS.

Yet another "t'other way" to level section-combs for baits without the Taylor machine: Dip them in ice-water, and scrape them right down with a blunt-ended knife. Guess it will work all right; and the apparent raggedness of the job probably counts little or nothing. B. T. Davenport, page 547.

HORSES AND COWS EATING SWEET CLOVER.

What has been done can be done again—so I guess if Mr. Boardman's horses and cow ate the sweet clover, big stalks and all, other folks' horses and cows might be graduated in the same "'ology" with proper tuition. Page 546.

THE ORIGIN OF HONEY-DEW.

On page 546, Mr. C. C. Parsons goes it strong against the "bug-juice" fellows. "We'uns," the guilty parties, are listening, and letting his stripes have all the redeeming power they are capable of upon our dirty hides. Powerful "curis" how the plant-secretion feller knows there ain't any "bug-juice," and the "bug-juice" feller knows there ain't any plant-secretion, and the heavenly feller knows there ain't neither one. However, it is legitimately to the point that Mr. Parsons had some honey-dew honey that gave the best satisfaction to the consumers.

FOUL BROOD AND PICKLED BROOD.

That frame of foul brood (page 545) is as natural as—death. Mr. France, as an inspector, seems to be free from dangerous eccentricities of carelessness—a great mercy in a public officer of that sort. I see he also edges in decidedly toward the view that pickled brood is a form of starvation. Say rather that it is a distinct germ disease, but a disease that never does much harm except when (from scarcity of pollen or something else) *the brood are first in a half-starved condition.* Human beings, after being kept in a half-starved condition long enough, die off like flies of pretty much any epidemic that happens to come along, when few or none would have died had all been well fed.

A NON-ROASTED 'TATER.

Very suggestive is that little editorial good-by to Cogitator, page 569. What a deft air of "good riddance of you," which nevertheless keeps clear of actually saying anything that the luckless wight could complain of! Ah, these editors! Now then, I feel compassionate toward the poor fellow—

Why drop thy foliage or flee,
Poor 'Tater, no man roasted thee?

THIN SECTIONS OF HONEY—SKIN-FLINTY BEE-KEEPERS.

I was almost tempted to laughter by the experience of F. W. Hall, page 574. The stingy fad of continually pinching the sections thinner is running against a stump. In too thin a space the bees get all on one side of the foundation and bend it far out of plumb. Then your extra-fancy honey is nice on one side and bare bones on the other, and not salable at all. Some bee-men are that skin-flinty that their souls look just like that on both sides.

HOT STONES FOR BEE-HUNTING.

Honey on hot stones for bee-lure, and same stones utilized to keep up a warm and fragrant areola around the bait and baited bees. Excellent kink in bee-hunting, one would say—if not too laborious. Samuel Varner, page 573.

PREFERENCE AS TO HIVES.

Of the 30 senators just half favor the Langstroth hive. But as to the sub-variety—whether the "Sweet little Minnie" or the "Large-hearted Polly"—the more part seem too bashful to express their affection right out in public. Minnie has three out-spoken lovers and Polly has four. No other hive than the Langstroth gets any large following. Seven of the non-conformist 15 favor hives of their own devising. Of the whole 30 the T super gets a mention from five, and the section-holders from three—super part of the question being ignored by the most. Opening article on page 561 chances on part of the same topic. Yes, Dr. Getaz, our colonies *are* too small in the spring (we Minnie-lovers), but still you don't grasp our real disease—mind so diseased that we can't believe they would open spring any stronger if we should go over to Polly.

A SWARM-CARRYING BICYCLIST.

O thou policeman, curse thy natal day!
Don't see that scorcher look some other way.
Touch him, as over broken bones he flees,
And he'll let loose on thee his sack of bees.

Even if he rides en-pajamas by so much the more it won't do to meddle with him. See page 570.

THE PUZZLE BETWEEN DADANT AND TAYLOR.

That puzzle of Dr. Dadant vs. Dr. Taylor, on page 570, I would solve thus: If the bees merely *spare* the virgin queen, but in their hearts do not accept her, then they will build drone-comb or none. If she is heartily accepted they will build no drone-comb unless they want some for other reasons. I don't know how it actually is, but I should rather expect an old colony, beginning to wish to supersede their queen, to change over from worker-comb to drone.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. OCTOBER 19, 1899. NO. 42.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Section-Cleaning Machines.—What has become of them? For a time their name was legion, and sections were to be no more scraped by hand. Now, when the time of year for scraping sections has again come and gone, no word is heard about them, and not a single section-cleaner offered on the market. Is Yankee ingenuity to be baffled by such a little thing as a section-cleaner?

Poet Bee-Keepers.—Editor Hutchinson says it is pleasant to know that we have in our ranks both a poet (Hon. Eugene Secor) and a composer of music (Dr. C. C. Miller). Please don't forget Mr. H., that altho Mr. Secor has done such fine service in writing bee-keepers' songs, he is not our only poet. Will Ward Mitchell has written much poetry for the Progressive Bee-Keeper, and that of no mean order.

Poisoned from Inhaling Boiled Bees.—Mr. Thomas Elliott, of Cook Co., Ill., writes the following account of a serious experience he once had when rendering a lot of combs from colonies that had starved:

Some three years ago I boiled down the combs from 150 hives in which the bees had starved out during a dry spell in California, and there were a great many dead bees in the combs. I used the extractor-tank out-doors, and it took me two days. From that time on my health failed. I can best describe it by saying that in one year I had become 40 years older. Every sense, feeling, or organ, in the human body that can be affected came under the influence of the poison. I was in a manner paralyzed, and the doctors told me that I could live but a short time.

But I found a doctor in Chicago who had the disease described in a book, and under his treatment I recovered. I then knew for the first time what the trouble was, and had I not found this man I would never have known what ailed me. I have known a number of cases like mine, but they never knew what the trouble was. One feature of the disease is that it runs its course in from one to three years, leaving the patient as well as before.

In boiling down the combs it distilled the poison out of the bees, and as I workt over the tank I absorbed the poison into my system.

I want to say to bee-men, Don't boil a dead bee, or a live one, for that matter; you might be sorry for it.

THOS. ELLIOTT.

Have any of our readers been affected as Mr. Elliott describes, after inhaling the steam or odor from boiled combs and bees when rendering beeswax? If so, we should be pleased to know it, as no doubt would also many others.

Is Honey a Luxury or a Necessity?—At Philadelphia some thought people would buy honey as a luxury, if it was low in price; others thought we should teach it is a necessity, not a luxury. In the Bee-Keepers' Review Editor Hutchinson says:

"As a rule, I think that people buy honey because they want it, and that they care very little whether it is called a luxury or a necessity. It is possible, however, that some people would buy it who do not use it, if they could be convinced of its healthfulness—they might then look upon it as a necessity. To accomplish this is the work of the honey-leaflet."

Bee-Keepers Who Injure the Honey Market are still being heard from. A good sample of how a certain honey-producer did was reported to us the other day. He probably is one of the deluded kind that think it doesn't pay to take and read a bee-paper. He sent two barrels of honey to a Chicago commission house to be sold. A representative of the firm called on a honey-user and said his concern had two barrels of honey they wanted to sell, but was told that no more honey was needed just then. "Well, make me an offer, anyway," was the reply. The honey-user said altho he didn't want it just then, he'd give *25 cents a gallon for it!* He got the honey because the commission firm didn't care enough about it to try to get what it was worth.

Two cents a pound for honey that was worth at least seven cents! And how much did the producer get out of the two cents after deducting commission, freight and cartage? Surely, no reader of a good bee-paper these days would be such a fool as to send his honey to a firm like the one mentioned. It pays to read bee-papers.

Following the Grand Army.—Dr. Miller says this in Gleanings in Bee-Culture about holding the annual national bee-keepers' convention in connection with the Grand Army meeting:

"Following the Grand Army with the United States Bee-Keepers' Association convention has its disadvantages, but they are far outweighed by the one distinct advantage of low railroad fares that cannot be so surely counted upon at any other time. By all means, let the settled policy be to follow the G. A. R."

Then Editor E. R. Root follows with this footnote:

"The only objection that can be urged against following the Grand Army is the inconvenience at hotels, and the general crowd. But we had none of those troubles at Philadelphia; and I think that, in spite of that, Chicago, our next place of meeting, will be big enough not only to entertain the Grand Army, but the members of the United States Bee-Keepers' Association, or what may then be the National Association."

The executive committee of the Chicago Bee-Keepers' Association expects to make arrangements for caring satisfactorily for those attending the convention next year in this city. But they can't do any better than did the Philadelphia bee-keepers, we are very certain.

Cash vs. Commission in Honey-Dealing.—At Philadelphia, commission men got their usual share of attention. Referring to this, and to the idea exprest by some that a commission man might win favor by abandoning the commission plan and paying cash, Editor Hutchinson, of the Bee-Keepers' Review, wisely says:

"This is probably true, but it must not be forgotten that, in the very nature of things, such a dealer could not afford to pay as high prices as might be secured by the commission man. If a man furnishes his own capital, and takes the risks of business, he must have pay for it."

Dr. Miller, in a "Stray Straw" in Gleanings in Bee-Culture, has also a good word for the commission man, as follows:

"Commission men are getting the worst of it nowadays. All right, brethren; bat them over the head all you like; but wait till a year comes with big crops and no offers, and you may be glad to have a commission man work for you. I've seen the same thing in years gone by. A scarce year brought into the field many purchasers. Then came a year of plenty, and with few exceptions they dropt right back again into the ranks of commission work, pure and simple. See if it isn't so again."

Editor Root then adds his comment to what Dr. Miller had to say on the subject:

"I'm not one of those who believe that we can dispense with the services of the commission men just yet. Indeed, I do not see how we ever can. But if we can induce more of them to do business on cash basis it will do away with some of the friction we find here and there."

We can't quite see how a commission man would be a commission man any longer after he begins to do a *cash* business. But perhaps Editor Root's "locality" differs from Chicago. We still favor the cash business, and never expect to handle honey on a commission basis. Does the A. I. Root Co. handle honey on any other than a cash basis? If that has been their method for years, why cannot all other dealers do likewise? We believe they can.

Mr. George Poindexter, of DeWitt Co., Ill., one of the exhibitors in the apiarian department at the Illinois State Fair last month, called on us Oct. 7, when visiting his son and daughter who live in Chicago.

* * * * *

Mr. John H. Martin, of Los Angeles Co., Calif., writing us Oct. 7, said:

"There was a little sprinkle of rain in the interior yesterday. We are hoping now that we will get wetness, and a plenty of it, all thru the winter."

* * * * *

Mr. F. L. Thompson, of Colorado, we learn, is making a tour of Utah, looking up the bee-keepers of that State. He went toward Salt Lake City on his bicycle until it broke down on the desert, when he had to finish the journey on the train. The yield of honey in the region of the above city was about a quarter of a crop, we understand, and it was sold at from 10 to 11 cents per pound for comb honey, and 5½ to 6½ cents for extracted.

* * * * *

The Columbia Incubator Co., of Delaware City, Del., is the successor to the Von Culin Incubator Co., of that place. We understand that the incubator offered by the Columbia people is one of the very best on the market, and is "sold on trial," guaranteed perfectly satisfactory in every respect. We don't know what more can be expected. Better send for a catalog, and mention seeing their advertisement in the American Bee Journal.

Mme. Modjeska was not only a famous actress, but also a successful bee-keeper, as per the following item in the British Bee Journal some time ago:

"A letter from San Francisco, in the Berlin Tagliche Rundschau, gives an account of Mme. Modjeska, in her present character as a California farmer. She has a ranch at the foot of the Santiago Peak, where she owns large flocks of sheep, from which she derives a comfortable income, and she includes amongst her stock 500 splendid Angora goats. Her great delight, however, is her prosperous bee-culture, for which she has acquired a wide renown. She owns over 700 colonies, and the honey is declared in the neighborhood to be the best in the world. Mme. Modjeska rises every morning at 5:30, visits her stables and cattle-sheds, and makes the round of her bee-hives; then she mounts her horse, which she bestrides after the masculine fashion, and gallops across her fields to see that everything is in proper order. She finds the actual shepherding to be more laborious, but more pleasant, than the part of the jeweled and ribboned shepherdess *a la Watteau* behind the footlights."

We do not know whether the lady still has her bees, but we presume she has not given them up. Perhaps some of our California subscribers know.

* * * * *

Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Association, spent Thursday, Oct. 12, in Chicago, when on his way to his Iowa home, from attending the annual meeting of the National Farmers' Congress which met in Boston early this month. Mr. Secor reports an unusually pleasant time among the historic things and places in and near Boston. The farmers' meeting was held in old Faneuil Hall, famous as the gathering-place of our forefathers when preparing the way for the freedom of this nation; and later again made sacred by the eloquence of Wendell Phillips and other great orators who were glad to be permitted "to spend and be spent" in the cause of freedom for the colored slaves. Then Mr. Secor stood on Plymouth Rock, and "shed tears over the graves of the fathers of our country." He visited the old battle-fields of Lexington and Concord, and other places of great interest. Mr. Secor was a delegate from Iowa, and has now attended four meetings of the Congress. Last year it was held in Texas. We know of few bee-keepers that travel as extensively as does our General Manager, and who seemingly enjoy long railroad trips as much as does he.

* * * * *

Mr. John Carson, of Newton Falls, Ohio, aged 65 years, was stung to death by honey-bees. It seems that recently he was afraid of his bees, and burned some sulphur to render them harmless while he workt among them. Instead of dazing the insects the fumes of the drug infuriated them, and they swarmed about his head and face stinging him in innumerable places. Burning with intense agony he reeled into his house, fell unconscious upon the floor, and expired within a short time. He was an old resident. We always consider it safer to be protected with a veil when fooling around bees. There is scarcely ever any excuse for not having the face protected as it should be. One of the best veils costs only 50 cents, and why any one should risk his life for so small an amount is more than we can understand. A sting on the hand seldom results fatally, but on the face or head it occasionally does. It pays to be on the safe side by wearing a good veil when doing anything with bees that wear stingers.

New Edition of A B C of Bee-Culture.—We have received a copy of the new (1899) edition of "A B C of Bee-Culture," by A. I. Root, and just revised by Ernest R. Root. It is indeed a fine work, very interesting descriptions of which have been given on pages 603, 619, and on page 635 of this number of the Bee Journal. It is a book that every bee-keeper should own, and read thoroly. The regular post-paid price is $1.20, but to all our subscribers who pay any arrears that may be due, and also $1.00 for the Bee Journal for 1900 (next year), we will mail a copy of A B C of Bee-Culture for only 75 cents, provided the order is received *before* January 1, next. We make this same offer to all who have paid their subscriptions to the end of 1899—send us $1.75 and we will mail you the book and credit your subscription for 1900. We make the same offers on "Langstroth on the Honey-Bee," revised by Dadant (1899 edition).

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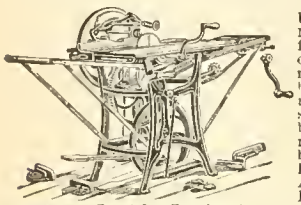

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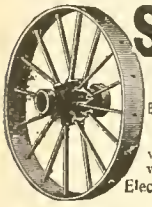

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BEEDOM BOILED DOWN.

The Hive Question is in the practice of bee-culture undisputably the most important and the weightiest, says Gerstung. Perhaps Whitcomb and Gerstung could make some sort of a compromise.

Breeding for Business.—Editor Root says, and says very truly: "If we can get up a rivalry between the queen-breeders of the country, so that they will strive for *business* instead of *color*, we shall have something that will put dollars into the pockets of bee-keepers."—Gleanings in Bee-Culture.

A Quiet Time.—Stenog says in Gleanings in Bee-Culture: "Between a very bad season and preparations for the Philadelphia convention, world-changing events in apiculture are scarce. Old standard subjects, such as wintering, size of hives, etc., are thrasht over with some vigor, but things in general are quite monotonous."

Apis Dorsata.—A Hollander by the name of Verholen, for several years, with the most tenacious pertinacity, tried in Java to domesticate the big Indian bee, but all in vain. Eighty-seven different colonies were captured and hived, but every single colony deserted their brood and honey, and took their departure.—Wuerzburger Wegweiser.

"A Swarm-Catcher" that requires to be 'placed at the hive-entrance the moment the bees begin to swarm,' as stated, would, we think, be of no service to bee-keepers in this country," says the British Bee Journal. Which raises the question whether the esteemed editors might not change their minds upon actual trial. Is not that exactly the B. Taylor swarm-catcher? and is it not considered to be of great service by at least some bee-keepers in *this* country?

Foul Brood and Foundation.—John H. Howard, in the British Bee Journal, admits that with the old process of dipping, as practiced by some, there is danger from foundation made from foul-broody wax, but with present-day plans there is none, and closes by saying: "In the interest of the craft, I therefore ask bee keepers to send along their foul brood beeswax, notifying its source, and we will return it in foundation, in which it is guaranteed that foul brood germs no longer exist."

Bee-Hunting is the topic for considerable discussion in the last number of the Bee Keepers' Review. The instructions are much the same as are generally given, the general idea being to find the direction the bees take from your bait, setting the bait farther along in that line until you get to or past the tree where the bees are, if necessary setting the bait out of the line so as to cross-line. With regard to seeing the bees at the tree, J. D. Beasly says:

"Never examine the body of the tree, but get the tree top between you and the sun and simply gaze thru it into space. If you see insects flitting about the branches you may suspect they are bees; and if they move regularly, as tho they meant business, you may be sure your suspicions are correct."

Editor Hutchinson refers to replies made in the American Bee Journal to the question of L. J. Clark concerning lining bees in a honey-flow. He does not seem to have much faith in the reply that bees will work on fresh honey during a honey-flow. "Possibly they will if the yield is light," says

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Root's Column

We must ask our Bee Journal customers to bear with us a little longer. Our bindery turns out 100 copies of the A B C each day, but we are still a little behind on orders. We confidently expect, however, to have **ALL** orders filled promptly within a week, or by the time this notice reaches you. We are much pleased with the number of orders we are receiving daily. Last week we gave you a sample of the index on Bees. Look at Comb Honey:

Comb Honey 72
" " Barber Method of Producing . 78
" " Cartons for 85, 86
" " Costing More to Produce 73
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Price, $1.20 postpaid, or $1.00 if shipt with other goods. This book may be obtained of

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he, "but it seems to me that a man could make but slight headway hunting bees at a time when they will not rob; and that is when there is a good honey-flow." Neither does he think they can be lined from their drinking-places along streams of water. He mentions a brook where the edges of the stream were fairly swarming with bees after water at a time when little honey was gathered; but during a good honey-flow scarcely a bee could be found near the brook. He mentions an instance where a puddle of honey stood for days on hard clay soil in front of a hive, and not a bee touchd it, being busy on basswood.

A New Basswood—Tilia Petiolaris.—The British Bee Journal is enthusiastic, as well it may be, over the discovery of a new linden or basswood tree—"lime" it is called in England—which is about three weeks later than the common linden, commencing to yield just as the ordinary linden ceases, practically doubling the length of the linden harvest. It is an exceedingly ornamental tree, annual growth strong yet pendulous; leaves large, dark green on the upper surface, silvery below. High priced, of course, owing to scarcity, but it may be well for bee-keepers to be on the lookout for Tilia petiolaris.

A Smaller Wax-Worm is reported in Gleanings in Bee-Culture by Dr. Miller. He says:

"I've read of a wax-worm smaller than the common kind, and within a week have seen it in two apiaries. It has no gallery among the cappings; indeed, I don't know that it has any gallery. Its presence is indicated by the wriggling of one or more young bees unable to leave the cell. Pull out the bee, and at the bottom of the cell is a worm about ½-inch long, slender and very lively. A sort of web is fastened to the young bee."

Two kinds of bee-moths are spoken of somewhat confusedly in the books, but in this country, at least in the North, bee-keepers have spoken as if there was only the one kind. The question is whether the Doctor has made a new acquaintance, or whether it is only our old friend (?), *galleria cereana*, in a different role.

Lazy way of Keeping Queens.—A Stray Straw in Gleanings in Bee-Culture is as follows:

"A caged queen may be laid at the entrance of any populous colony during the working season, and the bees will cluster over the cage and care for the queen just the same as tho she were inside the hive."—Bee-Keepers' Review. Two years ago I used a lazier plan than that. I threw a caged old queen at the foot of an apple-tree in the middle of the apiary. A few bees came and clustered on the cage, as they often will. Then I threw another old queen there, and in the course of a few days there were a dozen or so of them. They stayed there for weeks, thru rain and shine. An amusing feature was that, altho the cluster was never as big as my first, it swarmed very frequently (of course always returning), sometimes several times in a day.

The Origin of Honey-Dew, that ever unsettled problem, is up again in the Bee-Keepers' Review, J. O. Shearman and Adrian Getaz taking opposite sides. Mr. Shearman says it is secreted only after a rapid growing time is followed by a sudden change with cool nights, arresting growth; then when the weather gets hot again the honey-dew disappears, lice or no lice. Mr. Getaz thinks there has been a failure of careful investigation on the part of those who believe in honey-dew without lice. To produce anything like nectar there must be glands. If you cut into a cow, you will get blood and not milk; the milk can only be where the glands secrete it. So there may be an exudation of sap elsewhere than where there are glands, but it will be sap, not nectar. A reason for the doubt about lice in all cases is that the lice may be high up and at the ends of inaccessible branches.

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consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road for Milwaukee Ave. now, and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

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PAGE

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sounds all right, but the open field had better have Page Fence around it, with one or two Page gates.

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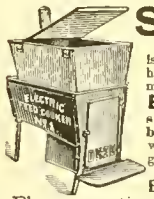

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"The aphides are of necessity always at the top of the trees or of the plants. If they were scattered all over, the excretions of the ones above would daub and smother the others."

"A Bad Leak" is what E. E. Hasty in Gleanings in Bee-Culture styles the loss that he thinks comes from the belief that prime swarms do not issue before 9 a.m. nor after 2 p m. In a large apiary there is such a general roar thruout the day that the additional noise of a single swarm is hardly noticed unless the bee keeper is keenly on the watch for swarms, and he will not be keenly on the watch at a time of day when he believes no swarms will issue. So he thinks many a swarm leaves for the woods before and after the traditional hours for prime swarms. Of the last 6 prime swarms that issued for him, one issued at 9:30 a.m., two at 11 a.m., two at 3 p m., and one at 4:20 p m. He thinks it a good plan to make a careful search of trees and other clustering-places once or twice in mid afternoon, and again just before dark. Chopping down some trees and thinning out others would help to make the searching easier.

GENERAL ITEMS

Won by Good Management.

During the past season I obtained from 54 colonies, spring count, 2,500 pounds of extracted honey, and increast to 74 colonies, but by good management I got it, as honey here is almost a total failure.

Our home of late has been cast into deep mourning, by the death of "Johnny," a bright little boy of 8 years, in which our hearts and pride rested.

MICHAEL MADDEN.
Russell Co., Ont., Sept. 30.

Poor Season in Vermont.

This has been quite a poor honey season in Vermont, being hot, cold, wet and dry. Basswood was no good in Vermont for the bees this year, and yet I never saw the trees, little and great, so full of blossoms.

Yellow Sweet Clover Seed!

We have it at Last!

We have finally succeeded in getting a **SMALL** quantity of the seed of the **YELLOW** variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium—

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So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us **ONE NEW** subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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My 50 colonies of bees gave me little over 1,200 pounds, a good share of it being fall honey. The honey is of good flavor and sells well at a good price.

My bees are in good shape for winter—plenty of honey and bees. Before they go to the cellar they will have oilcloth under the frames to keep the bottom-board clean. In the spring the oilcloth is taken out.

Skunks have been very troublesome this fall. I have caught a number, using steel traps at the front of the hives, hitching the trap to a long pole, and when caught they can be carried to the river and drowned.

To keep down increase I have the new swarm on the old stand with the parent hive by its side; the third day put all into the new hive from the old, minus queen-cells. I think I have a better way, and that is, to hive new swarms in supers filled with sections and starters, the number of supers being according to the size of the swarm. C. A. MARSH.

Windsor Co., Vt., Oct. 11.

A Light Honey Crop.

The honey crop is light here this year, and the winter stores of colonies will be very light. G. D. HAWK.

Sullivan Co., Tenn., Oct. 6.

Very Poor Season for Bees.

This has been a very poor season here for bees, about 75 percent of them having died last winter; then the spring was wet and cold, so they built up very slowly, and did not swarm any. I lost only about 25 percent, having mine well packt on the summer stands, and they will average about 25 pounds to the colony. S. J. MAGUIRE.

Benton Co., Iowa, Oct. 4.

More About Mr. Herman's Apiary.

On page 625 is an excellent illustration of Mr. F. G. Herman's apiary, in Bergen Co., N. J., but in the accompanying description his modesty has caused him to leave much unsaid. Living within a few miles of him I often have the pleasure of "wheeling" over to see his beautiful place, which is the neatest and most orderly of any it has ever been my good fortune to see.

Cleanliness and regularity are shown in all directions, the hives all in perfect alignment, every one as level as a spirit-level can make it, all nicely painted; the ground without a stone or even a spear of grass in sight; the honey-house supplied with every requisite, and everything in its place; smoker ready to light, extra veils for visitors, and all appliances ready for use; and this love of order extends to the inside of the hives as well—every queen is where she ought to be, every brood-frame where it will do the most good, sections and supers always ready; and with a man running an apiary of 60 colonies as a side-issue this means not only a good deal of work, but work rightly applied, and in a great measure accounts for his success as a bee-keeper.

In all respects this apiary is one that might be taken as a model by many of us, as it shows that a bee-yard can be a thing of beauty to the eye, and at the same time show a good, substantial result at the end of the season. GEO. P. PRANKARD.

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Small Honey Crop.

We had a small crop this year, but bees are in fine shape for winter. From 24 colonies I increast to 31, and got about 600 pounds of comb honey. I hope to do better next season. IRA CLAPPER.

White Co., Ind., Oct. 7.

Three Kinds of Cleome.

If Prof. Cook, who saw two kinds of cleome while traveling in this Arkansas Valley, had observed a little more carefully, he would have found a *third* variety, Lanceolata graveolens. JAMES H. WING.

Prowers Co., Colo., Oct. 4.

Queen-Rearing Experience.

On page 615, "Illinois" gets after Dr. Miller for not answering "Michigan's" question to suit him, as he seems to think the Doctor is holding back the truth to shield the queen-breeders' rascality. Now, I will give a little of my experience.

On July 4 I had 16 young queens to emerge from their cells, all as fine looking as one could wish to see. They were reared in a full colony, very strong in bees, as I made it up purposely, and I did not spare bees or honey as I wanted good queens.

On about the 8th or 9th day I saw one queen come in showing signs of being successful in mating, and in a few days she was laying, but would lay anywhere from the top to the bottom of the cell, and as I disliked giving her up I watcht her very closely. So one day, while holding the comb in my hand, I saw her drag off two eggs on the comb as she was walking along, apparently without being aware of it. Now I know this queen was reared in a strong colony with plenty of honey and pollen, but she kept on in the same way, about half or

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more of her brood being capt as drone-brood, so I pinchd her head.

Now, I cannot tell the cause of it, but she simply could not manage the machine—it "just laid itself," and she could not control it. I might have been to blame for this, but it was not for the want of bees, I am sure.

One other of this lot of queens came from the cell on the 11th day from the time the cells were grafted, and was laying at 10 days of age. I kept her until I had a very good colony of drones, as fully two-thirds of her brood were drones. What is the matter with me? They were for my own use. T. B. BOWNDS.

Milam Co., Tex., Oct. 4.

The Ontario Association's Meeting.

The executive committee of the Ontario Bee-Keepers' Association met in the city of Ottawa, Ont., Sept. 20, and set the date for its annual meeting for Dec. 5, 6 and 7, 1899, in the city of Toronto, and has arranged an excellent program. It is hoped that a grand reunion of bee-keepers from all parts of Canada and the United States will be held there, and all join in the discussions. No doubt that satisfactory arrangements can be made with the various railways for reasonable rates, and all persons interested in the production or consumption of honey are hereby cordially invited to attend.

Ontario, Can., Oct. 2. W. J. BROWN, *Pres.*

Nothing from Clover and Basswood.

The white clover promist a good yield of honey last spring, but, like last year, it gave us nothing. The linden trees were full of bloom with honey, but at that time it rained so much around here that my bees gathered very little of that. I must have lost thousands of my bees at that time by their venturing out in the drizzling rain, or being overtaken suddenly by a heavy shower, because my best colonies were reduced in numbers quite perceptibly when the linden bloom was over.

This fall was a little better than the summer; my bees workt quite lively for 3 or 4 weeks. They brought home enough for themselves to winter on and a little for their owner, but nothing to brag about.

Grant Co., Wis., Oct. 6. JOS. HENTRICH.

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Convention Notice.

Connecticut.—The Connecticut Bee-Keepers' Association will meet at the Capitol at Hartford, Wednesday, Nov. 8, 1899, at 10:30 a.m.
Waterbury, Conn. MRS. W. C. RILEY, Sec.

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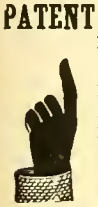

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Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 7.—We have a strong market on all grades of honey, and while there is no perceptible advance in prices, they are well sustained. Fancy grades of white comb, 15c; and good grades, 13@14c. amber, best grades, 11@12c; and off grades, 9@10c. Extracted, choice in flavor and body, and white color, 7½@8c; light amber, same grade, 7@7½c; off in quality and in color, 6@6½c; dark and light body, 5@6c. Beeswax, 26@27c.

This is the most active month of the year for the sale of comb honey in this market.
R. A. BURNETT & Co.

KANSAS CITY, Sept. 14.—The supply of comb honey is very light. Scarcely any extracted on the market. We quote fancy 1-pound comb 14@15c; No. 1, 13@14c; No. 1 amber, 12@13c. Extracted, white, 7c; amber, 5@6c; dark, 4@5c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Oct. 11.—Good demand for all grades of comb honey and the same finds ready sale at following prices:

Fancy white, 15c; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 10@11c Extracted, California white, 8½c; light amber, 7½@8c; white clover and basswood, 8c; choice Southern, 7@7½c; and common, 70@73c gallon. Beeswax dull at 26c. HILDRETH & SEGELKEN.

CINCINNATI, Oct. 9.—The demand for honey, both comb and extracted, is very good, with prices much better than a few weeks ago.

Fancy comb finds ready sale at 15@16c; darker grades are hard to sell at any price.

Good demand for all grades of extracted. White clover and basswood brings 8@8½c; amber and Southern at from 6@7c. Good demand for beeswax at 26c. C. H. W. WEBER,
Successor to Chas. F. Muth & Son and A. Muth.

We do not handle honey on commission—we buy for spot cash only.

SAN FRANCISCO, Sept. 27.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@7¾. light amber, 6½@7c. Beeswax, 26@27c.

Two shipments of extracted have gone forward to Europe since last issue, the ship Springburn carrying as part cargo 360 cases for London, and the ship Aristomene taking 100 cases for Liverpool. Market shows the same healthy tone as previously noted, with stocks of all descriptions of small volume.

ALBANY, Sept. 26.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

BUFFALO, Sept. 29.—There are virtually no arrivals of strictly fancy white comb honey. The very little arriving is poor, and the best of it brings 14 cents. We believe extra fancy would bring 15@16 cents, and any grade will sell well here. If receipts do not increase we may reasonably look for possibly higher prices. There is a very strong demand, quickly taking the few arrivals. BATTERSON & Co.

BOSTON, Oct. 13.—We quote: Fancy No. 1 white in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c. Extracted, light amber, 7@8c; amber, 6½@7½c.

But little new to note in this market on honey. The supply still continues to be very short while the demand is naturally a little lighter, as the retail trade is not quite up to higher prices, still with the light stock they must evidently come to it. BLAKE, SCOTT & LEE.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices White extracted, 8c. PEYCKE BROS.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth,
40Atf 2146-8 Central Ave., Cincinnati, O.

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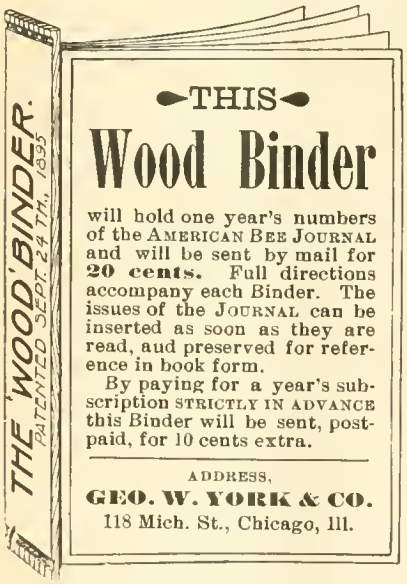

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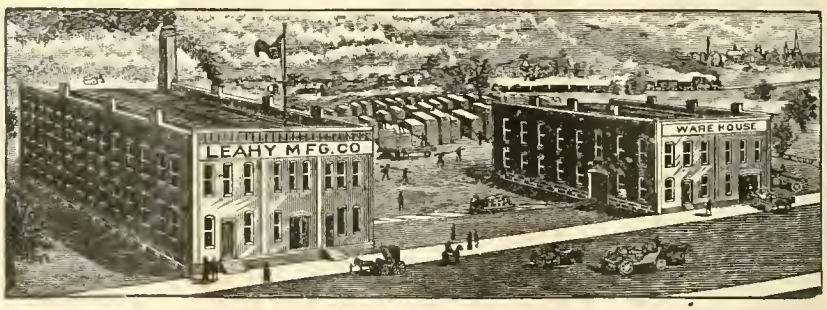

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39th YEAR. CHICAGO, ILL., OCTOBER 26, 1899. No. 43.

CONTRIBUTED ARTICLES

A City Bee-Keeper and His Apiary.

BY WM. H. HORSTMANN.

I AM a letter-carrier employed in the city post-office, and find apiculture a very pleasant and instructive as well as profitable business in connection with my other duties.

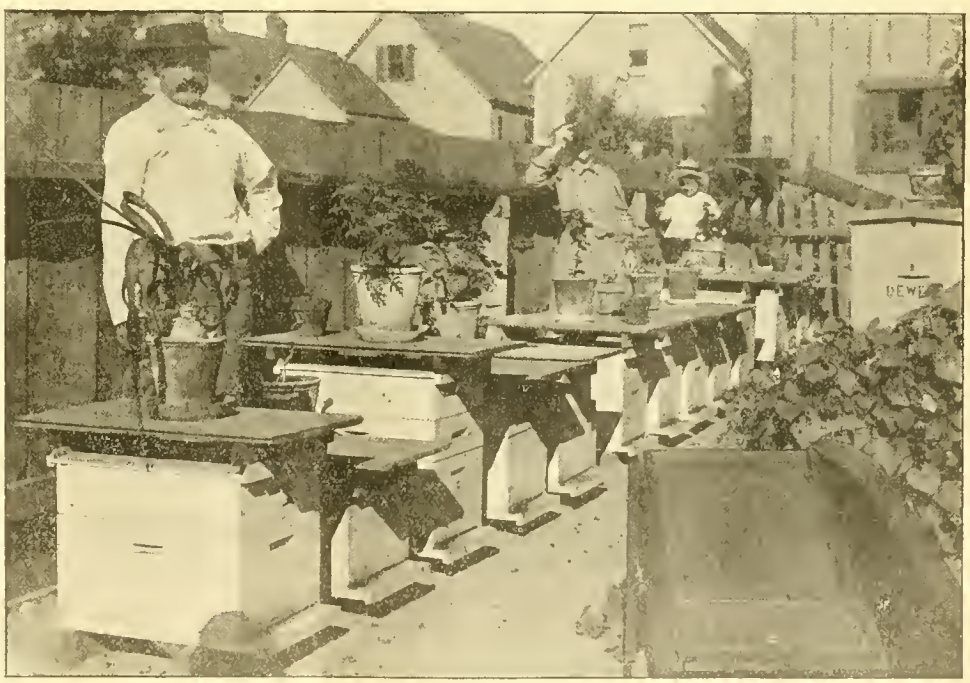
In the photograph are my wife and one of my three sons, Herbert. His work about the apiary is to water the plants on the hives used to hold down the shade-boards, and watch for swarms. Herbert takes a great interest in the bees; and is sitting on the hive of the colony I gave him, it being the first swarm that issued last spring. Herbert was born here May 8, 1892, and is a splendid helper in the apiary.

I was born in Greenup County, Ky., March 14, 1859, came here when 18 years old, and started in the bee-business in June, 1897, by purchasing two colonies of bees from a neighbor. I increast them to 11 colonies in 1898. During the severe winter of 1898-99, I lost six colonies, and during June and July of this year I increast by dividing and natural swarming until now I have 15 strong colonies.

My apicultural library consists of four books and four papers, the latter coming regularly as issued. I was surprised to find how little I knew about bees, after I started to read my bee-literature.

My wife was the first vice-president of the Chicago Bee-Keepers' Association; she also is very much interested in apiculture. Cook Co., Ill.

[The foregoing shows what a man can do with bees even when otherwise engaged—especially if he has a good wife and helpful children.—EDITOR.]



Mr. Wm. H. Horstmann and Apiary, of Cook Co., Ill.

Worms of the Wax-Moth in Comb Honey.

BY G. M. DOOLITTLE.

I HAVE had many letters of late telling me of worms in comb honey, and asking me to give my treatment for the same, in the American Bee Journal, which I will do, tho a little past the season when it would do the most good.

When honey is stored in a warm room, as it always should be, there comes a difficulty in the shape of the larvæ of the wax-moth, and unless this difficulty is headed off, it often results in quite a serious loss. I have yet to see the pile of 2,000 pounds of comb honey which does not have more or less of these worms or larvæ upon it, after it has been stored in a warm room for two or three weeks, altho, as the bees are becoming more and more Italian thruout the country, we see less and less of this wax-moth nuisance.

After the honey has been away from the bees about ten days, if we inspect the cappings of the honey closely we shall detect little places of white dust resembling little patches of flour on the combs, and usually the most abundant near the bottom of the sections. Now, altho this place may not be larger than the eye of a fine needle, still it tells us for certain that a tiny larva of the wax-moth is there, and that unless something happens to it to destroy its life,

it will destroy more or less of the nice white cappings which incase our honey.

While in different cities a number of years ago, looking after the honey market, I saw sections of honey which had worms in them as large around as a slate-pencil, and an inch or more long; and altho they had nearly denuded the honey of the nice white cappings to the cells, still I could not make some of the grocerymen believe that the worms lived on the wax, they calling them "honey-worms." Such a spectacle soon disgusts customers, and injures the sale of comb honey very much.

If, after several examinations, you fail to find such little white, flourlike places, you need be very thankful, and consider you are favored much above many of our fellow bee-keepers. If you find these, the next thing is to sulphur your honey, as this is the only known remedy for these pests, except picking the worms off by hand, which is too slow where there are many of them.

To sulphur, I procure an old kettle and put some ashes in the bottom of it, so that there will be no danger of fire resulting from the heat from the coals which are to be placed therein. When I have the kettle thus prepared I take it to the honey-room and pour sulphur (which has been previously weighed) on the coals, to the amount of four ounces to every 25 cubic feet contained in the room, when the kettle is quickly pusht under the pile of honey, the same having been piled on a platform a little off the floor for this purpose, and the room closed. You will do this thing as expeditiously as possible or you will be apt to get some of the fumes intended for the worms, which is not very pleasant, besides depriving the worms of just the amount you carry off in your lungs.

I now go and look in at the window, to which the few flies which chance to be in the room will soon come to avoid the fumes, thus vainly hoping to escape their doom. As soon as I see that the last fly is lifeless, I take out my watch, and when five minutes have elapst I open the window and the door to the room so the air will carry out the smoke as soon as possible, for, if allowed to settle on the combs it will give them a greenish color, which will be damaging to the sale of it. This same thing will also be likely to occur if much more sulphur is burned than the amount given above. It seems to be quite a nice point to have this matter just right; for if too much is used the combs are sure to be turned green; while if too little is burned the worms will not be killed.

The above has been arrived at after years of trial and experience.

If more honey is brought into the room after the first has been sulphured, this is also watcht, and when the marks of worms are seen on these, the same operation is repeated again, and so on till we are sure the honey passes from our honey-house without danger of these pests making an appearance after it has been placed upon the market.

All sections having cells of pollen in should be stored by themselves, as such combs are almost sure to be infested with eggs which will soon hatch into larvæ, where there is any trouble from the wax-moth at all.

While on this subject it may not be amiss to say that I am not troubled nearly as much with these worms at the present time as I formerly was. And there are two reasons for this, according to my opinion: There seems to be a greater intelligence among the apiarists of to-day, and even among the small bee-keepers having only two or three colonies, along the line of not leaving combs exposed after the bees are off them, so as to breed these pests, as was done by our forefathers. And still more care in the years to come would nearly, if not quite, free our apiaries of this moth difficulty.

Hives of comb left standing in the apiary after the bees have died from them, as they nearly always used to be, will give moths by the thousand to be a nuisance in years to come. Care-taking by all in this matter will soon bring us to where no sulphur will have to be used, and such care should belong to every man, woman and child keeping bees.

The second reason is the one alluded to in the forepart of this article, namely, the Italian bee. In localities where only these bees have been kept for a term of years, the trouble has mainly become a thing of the past. Italians seem to protect their combs better in some way so that the eggs do not find a place in the hive, and in localities where there are no other bees kept, and where no combs are left exposed after the bees are off them, the need of sulphuring has become a rarity.

Onondaga Co., N. Y.

Foreign Matters—Uses of Honey.

BY "STENOG."

OUR French exchanges show a great amount of work in collecting information relative to honey and bees. Bee-keepers of that country, as well as of Germany, seem to be closely related to each other thru the numerous associations they have formed. If a new use for honey is found it is immediately printed and past around. Mr. J. B. Leriche, an eminent bee-keeper of France, has the following to say relative to honey; and altho some of it is familiar to most of us, it is a good plan to give it to those who may not have seen it before. I translate it from the Revue Eclectique, of Paris, one of the best bee-journals printed:

"Honey is a healthful, concentrated, easily assimilated food, offered to man by nature, all prepared, extracted drop by drop from myriads of flowers. Our ancestors made of it their favorite food. They knew no other sweet. The introduction of beet-sugar has lessened the use of honey, so the latter is hardly ever found now except in the home of the bee-keeper or in certain medicines, or on the table of a few who know its virtues. We should go back to honey, for it is well known that this food, without rendering necessary any insalivation or digestive work on the part of the stomach, excites nervous energy, gives mental force and tone to the vital functions, and is very beneficial to persons of sedentary habits or those doing much headwork. All those who suffer from disorders of the stomach, and who have difficult or bad digestion, or those subject to constipation, should use honey daily; and after several months they will find the digestive organs restored to their normal condition. But the use of it must be daily and prolonged.

"To live long, one should take, every morning, some hot milk, sweetened with a spoonful of honey, and dip bread in it. Taken at night, honey favors digestion and wards off sleeplessness. When Julius Cæsar dined with P. Rumillius, to celebrate the 100th birthday of the latter, Cæsar askt him by what means he had preserved his strength of mind and body. 'By eating honey,' replied the old Roman.

"But honey is not only a good food but a good medicine, curing, without drugs, disorders of the stomach, chest, and of the voice, such as gastritis, bronchitis, colds, asthma and grip. The formic acid with which it is impregnated by the bees makes of it an antiseptic, purifying the disordered mouth and breath. Rheumatism is practically unknown among those who eat much honey. But the honey must be pure; and one buying it should be sure of the standing of the house selling it."

In the same journal Mr. Drappier gives good directions for wintering, preparations for which he begins in September. The first thing to be seen to is plenty of food. By waiting later the cold is liable to prevent the bees from uncapping the honey; and uncapt honey before winter easily ferments, and may induce spring dwindling. One writer says bees can winter only on empty frames; but at the same time their honey should be so placed as to surround the cluster, and as near them as possible. He feeds from 30 to 40 pounds per colony. Altho bees use but little food in winter, he gives them enough so he will not have to feed in spring.

He advises against spring feeding, as it may induce an abnormal development of brood. The best colonies will be hived in September on a maximum of 12 frames. Will it be necessary to remove the empty frames? Mr. D. says he does not. Mr. Bonnier has shown that a filled frame is equal in value to a partition so far as preservation of heat is concerned. That is, empty frames, instead of taking away warmth, tend rather to conserve it. Besides, frames of comb in the hives are better protected in fall, winter, and spring, against the moth-miller, by the bees running over them, than the bee-keeper could do it himself. This is for large colonies. Small ones run all kinds of risks. The existence of drones in a hive in September is presumptive evidence of queenlessness. Hives in the open air should be well protected on top. All cracks should be plugged up. Repaint covers, if necessary, so that not a drop of water can get thru.

These foreign journals give a vast amount of advice to those who must be beginners in bee-keeping. Every month has its detailed account of what to do and how to do it. In this regard they set a good pace for American journals. It might be remarkt, too, that the foreign journals draw more from sources outside of beedom than do those of America; and there seems to be a more intimate touch between the government and the various bee-associations there than

here. We get some ten French and German bee-journals here, besides one Spanish and one Italian. The French in particular are very interesting. Their printing is extremely accurate, an error being almost unknown, which remark applies to all the foreign journals I have seen.—Gleanings in Bee-Culture.

Concerning Bee-Repositories for Winter.

BY C. P. DADANT.

I WAS just preparing to write an additional article concerning bee-repositories for winter, when I noticed, on page 626, the article by Wm. M. Barnes, whom I know to be a practical bee-keeper, and I would suggest that those readers who are interested in this matter re-read his statement. I do not believe that I would build exactly as he has done, and as he kindly invites criticism, I will state where I would suggest changes, but I take notice that he reports success, and this is sufficient to give his cellar a good point. As I said before, the proper temperature is the main need, tho a moderate ventilation and good, dry quarters are also important.

Mr. Barnes very probably had good reasons for building his stone wall only part of the way down. But if I were building I would build the entire wall of stone, or all of dirt. If the spot is dry, and there is no danger of any leak, a dry earth wall boarded up and left slanting outward to prevent caving in would certainly be the most economical and the quickest built. But if there is danger of any moisture, the earthen wall will prove annoying after a few years. My experience with a cellar-wall placed like that of Mr. Barnes, above the level of the cellar, is that it will, in the course of a few years, cause the dirt to settle, and will eventually be deteriorated thereby. So I would say, make all stone or no stone.

His cellar entrance is good. Double doors, when connecting with the outside, are a necessity.

Mr. B. does not say how the ceiling above is made. It is probably a double floor with sawdust between the joists. If the cellar is all made of earth, it would probably be cheapest also to make the ceiling of earth in a method similar to that used in most of the Western storm-caves, and commonly used for keeping milk or vegetables. If the frost can be kept out it will not be difficult to cool the atmosphere of the cave by a little extra ventilation when needed.

A window or two might be made, with double window-frames a foot or more apart, and the space between the two filled with straw. It is necessary that the cellar be fixt so one may readily enter it without disturbing the bees or causing much change in the temperature. This is only so that the bee-keeper may be enabled to ascertain the exact conditions.

As a rule, our bee-keepers are not over-supplied with ready cash, and it will very often happen that the cheaper cellar will be decided upon. But if I were to advise, I would rather recommend the stone-wall cellar, for two or three reasons, the most important of which is its durability. Then a stone wall is more easily made rat and mouse proof. A cellar, dug in clay, will probably be free from vermin for a year or two, but in the course of time it will become more and more unsafe in this respect.

I could not sleep well, winter nights, if I knew that my bees were housed in a cave or a room in which either mice or rats congregated in any quantity. Their depredations might not do much harm to the bees directly, but they would be sure to disturb them more or less, and by this means cause a greater or less number to become restless and wander away from the cluster. Combs that were not covered by the bees would be more or less gnawed by them, especially if they contained honey, of which mice are very fond. With a good stone wall, and a well-made double floor above, it is not difficult to have a rat and mouse proof cellar if the sills have been carefully laid in a bed of cement. Such a cellar would last a lifetime.

The cellar or cave need not be large. The hives may be piled four or five in a tier. We usually take them without bottom or cap. Our hives are all supplied with straw mats over the frames. In the summer we have an oilcloth or enamel-cloth between the brood-combs and the straw mat. In the winter the enamel-cloth is removed, and the straw mat is laid directly over the frames, and this straw mat is quite sufficient to separate the hives that are piled upon one another.

We set the first hive on the floor, or on timbers, for support, a little above the floor. This first hive has its own bottom-board, but is slightly raised, or if the bottom is nailed fast, as much ventilation is given as the entrance will allow. The other hives are then piled on top of this with only the mats between the different brood-chambers. In this way a hundred hives may be placed in a very small compass.

The time best suited for removing the bees to the cellar cannot be given exactly, but only approximately. It must vary according to the latitude and the weather. In this latitude the first cold spell, after a warm day, towards the middle or latter part of November, has always proven the best. We want a cold day because the bees are less apt to fly about and worry the operator; and we want this to be as nearly following a warm day as possible, because on that warm day the bees have had a chance to empty their bowels and feel fresh and yet quiet. The longer you wait after the weather has turned cold the more chance there will be of the bees having begun to eat and load their abdomens with food. When they are once confined in the proper repository, their consumption is exceedingly limited, and they can stay month after month without stirring, if the food that they do consume is of good quality.

The entire winter problem may thus be summed in a very few words: Have good, healthy food, an even temperature, quietness, and a fair amount of ventilation, and your bees will come thru in good order in the most rigorous climate. Hancock Co., Ill.

Uniting Weak Colonies in the Fall.

BY MORLEY PETTIT.

WEAK or queenless colonies may be united in such a way as to make strong queened ones. There are various conditions which render this necessary.

A colony preparing to swarm builds a number of queen-cells and rears young queens. When these are within a few days of hatching, the swarm issues, accompanied by the old queen. Of the queens that hatch, the one which becomes queen of the "parent" colony takes her mating-flight and becomes impregnated. The parent colony is left quite weak by the departing swarm; but if this happens in the honey season it is soon repopulated by the progeny of the young queen. If, however, the swarm issues late, very little breeding is done, and we have a young queen in a weak colony. Many claim these late queens to be the best layers for the following season.

Queenless colonies usually become so during the mating of the queen. A cold wind may keep her at home and hinder her mating or prevent her return to the hive if she does fly out. This, of course, cannot be avoided; but it points out the necessity of examining every "parent" colony before the end of the breeding-season to be sure it has a queen. The presence of a laying queen can easily be detected by eggs or very young brood in the middle combs of the hive. Again, the young queen returning from her flight may become confused and enter the wrong hive. To avoid this, the hives, if uniform and in even rows, should be interspersed with boxes or other landmarks placed every fourth or fifth hive, and projecting in front of the row.

When two colonies are to be united, go to them in the evening and remove half the combs from each. Leave the fullest and best-formed ones, spacing them to one side of the hive with a dummy, to separate the last one from the empty half of the hive. If they both have queens, find and destroy the poorer or older one. In 24 hours the bees will have discovered their loss and will be willing to accept a new queen.

The following evening carry the queenless colony and set it beside the other. Open each hive by removing the cloth or honey-board, using as little smoke as possible, and sprinkle the bees freely with sweetened water scented strongly with peppermint. Almost drench them. They fill themselves with sweet, the peppermint counteracts the distinctive scent, and the bees of two colonies mingle in one hive without stinging. Some advise smoking at the entrance and jarring before opening to cause them to fill themselves with honey; but this excites the bees and does more harm than good. Removing the dummies, lift the combs from the queenless hive and set them, bees and all, in their original order, in the empty half of the other. The dummies are used to prevent the bees making a bulging cluster on the outside comb, which interferes with proper spacing when the hive is filled. Close the hive and blow a little smoke in the entrance.

As half the bees in this new hive are on a strange

stand, precautions are taken to insure their safe return when they first fly out in the morning. An alighting-board is set on edge in front of the entrance. The bees, being compelled to go around the ends to get out, discover that their home is changed, and circle about to locate themselves before flying away. In spite of this, however, many go back to their old home and fly about for some time unless old landmarks are removed as much as possible. If other hives are near they may try to enter them, and probably meet their death at the entrance; but in this case, if an empty hive be set on the old stand they soon return to their new home.

Uniting weak colonies is done in October when the hives are being overhauled to insure proper combs, and fed for winter and spring. By another method, when the bees of both swarms have been well smeared with the syrup, the queenless ones are shaken on the alighting-board of the other and allowed to run in. In this case it may not be necessary to kill the poorer queen beforehand, as she can be easily distinguisht and caught on the alighting-board as the bees spread themselves over it while going in. The best combs are selected from each to make up the new hive. The disadvantage of this method is that the strange bees mix at once with those in the hive, and are more apt to be stung; whereas, by the former method the mingling is very gradual, and involves less danger.—Farmers' Advocate.

Elgin Co., Ont.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 662.]

Mr. Selser—I don't believe there is one in Philadelphia that adulterates honey, because he must put on the combination. You can find honey put up in glass packages and markt "pure honey."

Mr. Abbott—Let me make a suggestion: They do not sell this honey in Philadelphia, but they ship it to Missouri or some other State. Every little while we see Philadelphia honey. It comes from every place.

Dr. Mason—If one lives in a congressman's district, even if you did not support your representative, you have influence over him, and he is generally glad to please you, and thus perhaps get another supporter if he can. At any rate, don't fail to try your power over him.

Some one suggested that a committee of three be appointed to see that Mr. Abbott's paper is publisht in a Philadelphia newspaper, but Mr. Miller, of the Philadelphia Call, being present, was introduced, and said: "Altho not a member of this Association, I have been interested in its proceedings, and have tried to have a reporter here, and we will be glad to publish Mr. Abbott's paper. As a matter of courtesy we would not ask to get ahead of other papers in the city, but will put the address in type and furnish proofs."

Mr. York—It is possible that Mr. Miller may be able to get some of the President's address publisht also.

Dr. Mason—It may not be best to have all that is *said* publisht. It might do more harm than good.

Mr. Selser—City papers are not like country papers. If they thru courtesy put any more in, all right.

Dr. Miller—There is one thing that I think ought to be said. While what Mr. Miller has said is true, I will say that the press of Philadelphia has shown more courtesy than has that of any other city in which we ever met.

Mrs. Starr (of the Public Ledger)—I wish to say that I was scolded for not giving more extended notice. I had but one program, and so could not scatter them as I might otherwise have done, and the G. A. R. naturally takes more of our notice.

Dr. Miller—When a woman lacks material she makes it.

Hon. Eugene Secor, of Forest City, Iowa, General Manager, then made the following verbal report:

Report of the General Manager.

I have no written report. I did not notice that I was on the program until a day or two before I left home. I might say for the benefit of some, that during the meeting in Omaha the General Manager was empowered to initiate measures in some city for the prosecution of the adulterators of honey. After consultation the Board of Directors concluded to make an effort in Chicago, Ill., to secure the conviction of adulterators.

In the first place, we needed a chemist who knew how to test honey so as to *know* when it was adulterated, so we secured the services of a competent one, and gave him samples and let him analyze them. We spent the sum of ten dollars in analyzing honey. I made a contract with a lawyer, and he was to take the sole charge of matters. He had nothing to do in court except to get witnesses and look after matters in general.

I thought it was not necessary to make a written report, as I soon shall make one, but the Association has spent $200 to enforce the law on adulteration in Chicago. Mr. York has given quite a full report in the American Bee Journal, which has been copied in Gleanings in Bee-Culture. In the American Bee Journal for Aug. 31, there is a very full report of this case, and I wish to say that Mr. York cannot be too *highly* praised for his efforts.

I would like to know how many present read the Bee Journal; let all such raise a hand. [A large majority raised a hand.] I see so many read it that I will omit reading the report.

Mr. York has shown great interest in this matter without any compensation. I don't know how you *can* compensate him in any other way than by subscribing for the American Bee Journal.

Mr. York didn't know that I was going to say this, and I have not been askt to say it. You can read this report and see what has been done in Chicago. The money has not been wasted. Producers label their products correctly, but adulterators falsify their labels.

I might add that on this matter of adulteration I have many things to say, but they will go in my annual report.

EUGENE SECOR.

Mr. Selser—We do not have to do anything of this kind in this State. There are appointed eight commissioners, I think, and if you go into any store and try to sell adulterated articles you will get caught up very quickly.

Dr. Mason—In Ohio we have a pure-food commissioner with a large number of deputies scattered all over the State, who are watching for adulterated articles. The commissioner does all the prosecuting, and the State pays all expenses, so we have no adulterated honey in Ohio.

E. R. Root—I suggest that in prosecuting adulterators the Board act *independently*. If any of the members have any suggestions to make, all right. I move that the work of prosecution be carried to the fullest extent that the treasury will admit of.

Dr. Mason—Why not leave the matter to the Directors, and treat them as we should our congressmen, as our representatives, giving them all the help we can, making such suggestions as we deem best, but leave all matters to their best judgment, and entirely in their hands.

At this point Mr. York, who had been appointed a member of the committee on resolutions, requested to be excused from serving, and Pres. Whitcomb appointed W. Z. Hutchinson in his place.

Mr. A. I. Root was on the program for an address, but, being unavoidably absent, Mr. E. R. Root had been requested to occupy his place, and did so in the address which follows:

Apicultural Statistics for the United States.

I did not come prepared to present to this convention an array of statistics. If I had, I would have brought a longer list; but in view of the fact that I have been askt to take the subject assigned to my father, who could not be present, I thought I could do no better than to present to this convention a few figures that have recently come to my knowledge.

By way of preface, I desire to say that government statistics have been very unreliable. For instance, South Carolina has been credited with producing the largest amount of honey of any State in the Union. New York and California, on the other hand, have been placed clear at the bottom of the list as honey-producing States. Any bee-keeper who knows anything about the industry knows that such a statement is as wide of the truth as it possibly can be. California and New York are probably in the lead, while South

Carolina is probably at the bottom of the list. For years no one has known just how large our industry is when measured in dollars and cents, altho a great many guesses have been made. It has been estimated that there are something like 300,000 bee-keepers. This estimate was based on the fact that we at one time had a catalog or list of the names of something like 300,000. Indeed, we have such a list now. That there are 300,000 people who keep bees is probably a conservative figure; but that there are 300,000 of what might be called bee-keepers—persons who make the production of honey at least a prominent side-issue—is doubtful. I should say a fair estimate of the first class I have mentioned would be something like 500,000; and of the latter 200,000—that is, 200,000 *actual* bee-keepers; for in this list we do not include those who keep one or two colonies in old-fashioned skeps or log-gums.

If there are 200,000 bee-keepers, what is the total output of honey, both comb and extracted, that is annually produced in the United States? Up till within recent times no reliable data have been presented upon which we could base an estimate. A few years ago I tried to get the manufacturers of bee-keepers' supplies to make a report of the number of sections annually sold within the current year. While some complied with the request, others, thinking possibly that some advertising scheme was on foot from which odious comparisons would be drawn, declined to give the number of sections they sold. I thought that if we could get at the actural figure, we could get a very close estimate of the number of pounds of honey annually produced, providing, however, that this figure would be an average for a series of four or five years. Within the last two or three years, however, we have been enabled to get hold of the figures, so that I believe I am to-day able to report the number of section honey-boxes actually made in one year. Now, then, for the figures:

The average number of sections made each year for the last three years is somewhere between 50,000,000 and 60,000,000. We will suppose that the sections, on an average, when filled with honey and placed on the market, will hold something like ⅞ of a pound. After talking with various members of this convention between sessions, I am inclined to place that as a fair estimate. To make even figures, then, we will estimate that there are 50,000,000 pounds of comb honey produced annually in the United States. Calling this worth 10 cents a pound, which I believe is conservative, this would make the entire comb-honey product worth $5,000,000.

But, you will say, some years a good many unused sections are left over. Granted. But there will be, on an average, as many left over from one year as another. While perhaps three years is not long enough time to reduce the figures to a good average, yet I should say the last three years, considering that two of them were very poor, would give us a very conservative figure; so, if anything, the amount of comb honey annually produced in the United States is not only worth $5,000,000, but somewhat more. Just how much more I should not dare to say.

Now, then, if $5,000,000 represents the comb honey annually produced, how shall we get at the amount for extracted? This is somewhat more difficult. However, I think we can safely estimate that, in view of the fact that extracted honey is produced much more largely in the South than in the North, and that a good many bee-keepers in the northern portions of the country produce the liquid article, it will be fair to assume that there would be just about twice as much of extracted honey produced as of comb. This would give an aggregate of something like 100,000,000 pounds of extracted every year. Calling this worth 5 cents a pound, we should have another $5,000,000—a valuation that I should consider rather conservative than otherwise; for good extracted honey sells at 6 and 7 cents ordinarily, and off grades at 3 and 5, while California honey, when it reaches the markets of Chicago and New York, costs anywhere from 5 to 6 cents.

I have not ascertained the exact number of bee-hives made by each manufacturer; but I know the product turned out by one or two of the largest; and taking this as a basis I estimate that something like 200,000 hives are made every year. Ten years from now there will be at least 2,000,000 hives in the country. Assuming that a like number has already been made in all the years gone by, we may estimate that something like 4,000,000 hives will be scattered thruout the country. I say "estimate," for I fear it is nothing more nor less than a poor guess. Assuming that there are now 2,000,000 hives and 200,000 bee-keepers, that would leave 10 hives to each bee-keeper; and by a bee-keeper, as I have explained, I mean any person who has modern hives, and who attempts to put up his honey in the ordinary modern package.

Some years ago Mr. Newman, then editor of the American Bee Journal, figured that there were 300,000 bee-keepers in the country, and that there were 10 hives to the bee-keeper, on an average. This would make an estimate of something like 3,000,000 hives. Altho several years have elapst since then, it is at least true that my estimate of 200,000 bee-keepers and 2,000,000 colonies is quite conservative.

The only figures that I am able to present to you as being anywhere near accurate is the amount of comb honey annually produced. All the other figures are based somewhat on this, and are more or less estimated. But I think we may safely say, by way of recapitulation, that our industry represents an annual product of something like $10,000,000 in honey alone. ERNEST R. ROOT.

[Continued next week.]

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

'TWOULD STRAIN OUR INVENTION.

Home from the convention—
We hardly need mention
How blessed it was to be there;
But it's not our intention
(Too much for invention)
To tell you WHAT PROFITS we share.

A TRIPLET OF "AFTERTHINKS."

Capital editorial idea to clap into the convention number the pictures of the United States' officers and directors.

That Florida bear-trap (or night-cap) I think an excellent idea which ought not to be forgotten. Page 570.

C. P. Dadant is a man after my own heart in despising to have the entrances trapt up with perforated zinc. But we Minnie folks have to have it under the extracting-supers.

DISTANCE TO PREVENT MISMATING.

Doolittle's highly important evidence on page 564 is not new; but it is needful for it to be often repeated, so many high authorities are determined to resist it. Bees do cross at five miles distance, and it is all in the queen-breeder's mind (in most cases) that his queens *cannot* mismate.

SWARMS DESERTING—VISITING DIFFERENT FLOWERS.

Mr. Doolittle solves with much ability the first of the problems on page 578. I have thought in such cases of swarm failure that it was disgust, and a sense of their helplessness to save their queen, rather than a lack of queen scent, that made the bees go home, all but the few engaged in hostilities.

And so the adherence of bees to one kind of flower during a trip is not so absolute as we have sometimes thought, seeing he observed raspberry and clover visited successively. I think a bee prospecting for honey, and *not getting much anywhere*, visits freely any flowers that may come handy. Perchance neither clover nor raspberry were yielding very well when he made this observation.

QUEEN-REARING COMMENTS.

Mr. Alley is one of the specially eminent queen-rearers of this continent—one of the first half-dozen—and therefore his pictures and article, page 577, deserve the most careful consideration. He hardly needs to prove to us that we do not *have to* make artificial cups, and put in jelly by hand, and all that sort of thing; it's only a matter of convenience and speed—always providing that the artificial methods do not deteriorate quality. To say 84 hours after laying is more to the point than 12 hours after hatching, because the time of laying is easier found. His arrangement of cell-holding sticks to slip in and out of suitable notches is admirable. Wonder why he curves the lower surface in such a long, regular curve. And why is the beeswax to stick things on with, half resin? Perhaps pure beeswax is more inclined to let go. And the man who objects to fine, fussy work, for him to do there'll always be coal to shovel and

ditches to dig—he's out of place at queen-rearing. The remarkable thing about the system is that after 48 hours the young queens are nurst by bees not queenless. I suppose the proximity of lots of young brood is what is desired, while the broodlessness of the starting colony is depressing, and damaging to the results if the queens stay there too long. "What is home without a baby?"

KILLING BEES TO SAVE THE FOOD.

On page 579, Mr. Armstrong is right that the bee-business abounds in *surprises*. Killing part of a colony in the fall to save the food they would otherwise eat, it will do to mention as an eccentricity, but not as a plan to be tolerated. Not only is the danger of losing the colony greatly increast, but even if they survive the gain is little or nothing. The amount of honey 5,000 bees by themselves would eat in getting thru is nearly the same as 10,000 would require. If the conditions were very favorable I am not sure but the 10,000 would sometimes eat less than the 5,000.

"FROM THE EGG TO THE PERFECT BEE."

The article of H. W. Brice, page 579—"From the Egg to the Perfect Bee"—it would take a whole Afterthought to talk of all its talkable points. We are sometimes told minute particulars which do not verify when a body tries to verify them. Hardly want to hint that this is an example, but still it will do to "watch a little out." Have we not somewhere photographs of the position of bee-eggs which hardly tally with what Mr. Brice tells us? Even granting that *most* of the items are correct, the paper is a valuable one that should not be neglected. I feel surprised by the statement that the young larva is certainly unfed for 12 hours. I had supposed that bees when feeling in a hurry for brood, placed food around the eggs a little before they hatcht. But then I never made minute personal observations. Not making them when I was young and keen-sighted, they would be troublesome now—'spects I must leave it to the boys. Was also unaware of any distinct "weaning period," when the change is made from jelly-like food to the coarser kind. May it not be that the food for the little fellows and the food for the half-grown ones is prepared by two different sets of nurses (we would incline to say it *must* be so), and that occasional failure to connect, rather than any deliberate weaning, is the real state of the case? As to the 12-hour initial fast, that seems a little more reasonable when we remember that chickens need no food for a long time after hatching. Accepting this author, there are three distinct kinds of larval food: 1st, a transparent fluid; 2nd, a milky semi fluid; and 3rd, a food containing comminuted pollen-shells or residual matter.

EXTRACTING FROM THE UPPER STORY ONLY.

Yes, Mr. Snell (page 580), two stories of extracting-combs, extracting from the upper, but never from the under—putting the under up above instead—that's the way to have a prime article. But what are we poor wretches to do who never have a flow strong enough to justify so big an outfit? The Pettit system, given on page 594, answers this last question quite well.

THICK WALLS FOR THE STRONG—THIN FOR THE WEAK.

Thick-walled hives to winter strong colonies, and thin-walled hives for weak colonies. May be, Mr. McNeal, you are right for the Ohio River; but I doubt the latter part of it for the Ohio north line. Page 580.

SINGLE TIER OF HIVES IN A HOUSE-APIARY.

Quite likely A. H. Duff is right in moving for the total abolition of the upper range of hives in house-apiaries. Manifestly an annoyance when manipulating the lower range. The only object seems to be to save half the construction expense. Make the saving by a cheap style of construction. Doubling the expense to have the house "scrumptious," and then halving it again by crowding a grand nuisance inside, is hardly sensible, that's a fact. He says a convenient painted house can be made for one dollar a hive with only one range. Page 581.

NOT A MAKE-BELIEVE PHILOSOPHER.

That little boy, page 585, who *made believe* a bee was stinging him, to keep himself from over-estimating the pain he was required to bear during an operation, was a philosopher of the first water.

LATE FERTILIZATION OF QUEEN.

The evidence offered by Bernard W. Hayck, page 589, that a queen was fertilized at seven weeks old, seems to be very nearly absolute. Valuable bit of experience. Quite possibly in many cases of aged virgins inborn worthlessness and not age is the real trouble. I believe it has been *suspected* sometimes that queens emerging late in autumn became fertile in the spring; but I do not remember any positive case which came near to this one.

PUT HIM "IN PICKLE."

He'd know the location of pickled brood,
That "Colo" man, that "Colo" man.
Who can sate his inquiring mood?
No one can, no one can
Send him down where all pickles are,
To the pickle-jar, to the pickle-jar.

DUTY ON CUBAN HONEY—MODERATE SWARMING.

Ninety percent of the bees of Cuba extinguisht by the war! But peace could very quickly restore them—we needn't stop crying "wolf" on that account. But it is coming to look rather doubtful whether the duty on Cuban honey will ever be taken off—even if Cuba stays American. Interesting to hear that (contrary to what one would expect) swarming is quite moderate in Cuba—not nearly the trial that it is here. Page 596.

WINTERING AND HONEY-STORING—BULGED SECTIONS.

It's a little disquieting to learn that the colonies which winter best will not give one so much surplus as those less fortunate. It would be a relief to say, "Don't believe a word of it:" but it's *Doolittle* that says it (page 594), and it's not healthy to "conspute" him. I'll just say it's because he keeps pure Italians and I keep well-bred hybrids. I think my kind seldom crowd their queens with honey. Put honey in the brood-chamber often enough, but willing to take it out again when she wants them to.

Mr. D. shows excellent knowledge of human nature when he multiplies by ten the "*few*" bulged sections that the anti-separator folks admit they have.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Black Drops from the Bee-Smoker.

Not long ago in reply to a question in this department, I said the remedy for a smoker that let fall inky drops was to clean the smoker. F. L. Thompson mentioned this in the Progressive Bee-Keeper, and said he had just tried his smoker after a fresh cleaning, and it was more vicious than ever before in dropping the black stuff; but he gave no remedy.

There may be a difference in cleaning smokers. If you clean out the nozzle of the smoker, it will drop worse than ever. Clean tin is a good non-conductor, so the moisture in the hot air condenses on the tin surface and runs down in black drops. When the inside of the nozzle is coated well, that serves as a non-conductor, and the dropping is not so bad. The cleaning out, however, to which I referred, was that lower part under the fire that in most smokers admits the air to the fire. The little holes there sometimes become clogged, and when you clear them out so as to make the fire have a better draft, I think you will find less trouble with the dropping. It may not make as much difference as I think, but certainly I do not think cleaning out the nozzle will help.

Critic Taylor comes to the rescue in the Bee-Keepers' Review, and says the remedy is dry fuel. Of course, the less moisture there is, the less can condense and drop. Why didn't I say so before? Just because I didn't know any better. My ignorance is less excusable because during the past summer I have used very dry chips from the chip yard and have had no dropping. But it never occurred to me

that it was because the fuel was so dry; and it never occurred to me that a clean nozzle might be worse than a foul one. I am much indebted to the brethren for straightening me out. C. C. MILLER.

Ownership of Wild Bees—Best Hive.

1. If I find wild bees in a tree on somebody else's land, can the owner of the land claim the bees?

2. What is the best kind of bee-hives? MINN.

ANSWERS.—1. That depends upon your laws, which you can find out about from some lawyer or justice of the peace. Very likely you will find that the one that finds the bees may have some claim on them, but if he cuts down the tree he is liable for damage.

2. That depends upon circumstances. If you follow the old plan of taking up bees in the fall without ever taking any surplus from the tops of the hives, then there is probably nothing better than the straw skep made in the shape of a sugar loaf. If you have surplus boxes on top, but never want to open the brood-chamber, then a common box-hive is the thing. Next to the straw-hive it suits the comfort of the bees. But if you want to investigate the brood-chamber at proper times, (and if you are intending to do very much at bee-keeping you will want to do so), then the movable-frame hive is best. Of these there are many kinds, and there is a difference of opinion as to which is best. What may be best for one may not always be best for another. Probably the most popular hive just now is the dovetailed, with frames 17⅝x9¹⅛, outside measure. Those who give close attention to their bees may do with the 8-frame hive; for others, a larger hive is better.

Combs Bent and Broken in Extracting.

I bought an extractor from Ontario, and put into it some beautiful, straight combs in the Hoffman frame, and almost all those combs were bent and some broken when taken out of the honey-extractor. The honey taken from them was all right, but the combs were in a bad shape. Is this a common fault with extractors, or is it due to the weakness of the combs, or what? NEW BRUNSWICK.

ANSWER.—One cannot say positively without seeing, but the probability is that the combs were new and tender, and heavily filled. In such case they may break in any extractor unless great care is used. First turn the extractor slowly, and empty one side partly. Then empty the second side, after which complete the first side.

Bees Carrying Water in the Fall.

Do bees store water in the cells in the fall of the year for winter use? I see my bees are carrying water from the hens' drinking-dishes. MASSACHUSETTS.

ANSWER.—Bees carry much water into the hive, especially in the early part of the season when they are breeding heavily, but I have never seen any testimony to the effect that they store it in the cells. It is probably used to dilute the honey for consumption.

Inside Hive Arrangement for Winter.

I have a precious colony of bees that I got from Toronto last June, and tho I lost about half of them in bringing them up here, they built up fast, and have kept strong ever since. They have filled their hive with nice honey for winter stores, but the end of September brought cold, wet weather, and they have taken to fighting the drones that are big, strong ones, often throwing them off with an angry buzz, and then they bounce back into the hive again. I often feel like helping the workers, but fear I might kill the queen, and I do not like to kill even a drone. It does seem strange that one cannot go far into the study of Nature till he finds the strong oppressing the weak. However, I do not think the workers use their stings in fighting their stingless brothers, but meet them honorably on their own ground, which is another thing to be wondered at.

But what I wanted to write about was the construction of the hive inside for winter. As this is my third attempt with bees up here, I would like very much to succeed. Our winters are long—six or seven months—and the temperature drops as low as 40 degrees below zero during some cold snaps. I want to put a two-inch dummy filled with chaff in each side of the second story, and a one-inch dummy in each side of the first story. That will leave four frames in the top story and six frames in the bottom. Should there not be fewer frames, and more room for clustering in winter?

And if the 10 frames are filled with honey, the four dummies with chaff, a quilt on top, and close fitting cover, with no ventilation on top, do you think that would do for the inside?

I will pack in a case all around the outside with nice, dry leaves, and there is always lots of snow. Last year the frost never got into the ground at all, the snow was so deep. I very much fear brood-rearing will have stopt, but we expect good weather yet. THOMAS HENRY.

Muskoka, Ont., Sept. 29.

ANSWER.—It is now in general considered best to leave in a given space the same number of frames in winter as in summer. Those frames filled with honey are better than empty space, and your arrangement is probably all right, only with no top ventilation you must be sure to have plenty below, leaving the full summer entrance.

Moving Bees After Dark—Whiskey for Bees.

1. Is it possible to bring a few bees from a neighbor's apiary after dark, so that they fly the next morning to induce robbing from your own colonies?

2. Is whiskey good for bees, if you know how to mix it with honey? INQUIRER.

ANSWERS.—1. If you should bring a few bees from your neighbor's apiary after dark, letting them fly at will in the morning, you would hardly induce robbing thereby. A few strange bees allowed to enter a hive after dark would stand a good chance of being killed. If not killed, they might unite peaceably with the colony, but they would not be more likely to rob than if they flew to your hives in the daytime.

2. Whiskey is not good for bees, neither mixt with honey nor straight. ["Touch not, taste not, handle not," is the best way to treat whiskey.—EDITOR.]

Packing Material for Winter—Late-Reared Queens.

1. Where chaff is not obtainable for chaff division-boards and chaff cushions, what is the best substitute? How would dry leaves answer the purpose, wheat bran, dry sawdust, and oats? If all of these substitutes are practicable, which is most suitable?

2. How would this style of packing work for cellar-wintering? Draw down smoothly over the tops of the frames, and down the outside frame on each side of the brood-nest, say half way down, three or four thicknesses of newspaper, first cutting thru each comb four or five ⅜-inch holes about four inches below the tops of the frames, leaving off or using Hill's device, as may be best.

3. If queens hatcht in autumn should not become fertilized before spring, would it be best to destroy these young queens in the spring and replace with laying queens, or await their fertilization? METROPOLIS.

ANSWERS.—1. Any of the things you mention might be used for packing except probably oats. Dry leaves are excellent. Perhaps, all things considered, dry planer-shavings are as good as any, especially as they are in most cases so easily obtainable.

2. I think bees would do well with such packing, and if your cellar is all right they will do without any packing and without any holes in the combs. In a few days my bees will go into the cellar just as they were on the summer stands, only there is an entrance two inches deep the width of the hive, and a space of two inches under the frames. The papers might be troublesome to the bees, for they would be likely to gnaw them.

3. Some say that a virgin queen may stay in the hive thru the winter and be fertilized in the spring. Mr. Simmins, the editor of Bee-Chat, says in the most positive manner that such a thing never takes place; that in the supposed cases the young queens were fertilized in the fall but did not begin laying till spring. If you have a young queen that does not lay in the fall, it might be worth while to wait in spring till you see the raised cappings of drone-brood in worker-cells before you decide to kill her.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. OCTOBER 26, 1899. NO. 43.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Advancing Price of Honey.—Rev. E. T. Abbott wrote us Oct. 13, and in reference to the advancing price of honey had this to say:

I noticed what you said in your editorial on page 632, about the advance in the price of honey. I had been wondering why some one did not make the suggestion that honey had already advanced, as it has been bringing from two to three cents more per pound this year than it has for some time. They are wanting 13¾ cents by the carload, for Western comb honey delivered here, and I think I could have bought the same kind of honey last year for 10 cents. Everything has advanced in price, and honey is no exception to the rule. I feel quite sure that it will continue to advance until the next honey crop is harvested, and I doubt very much if it is ever again as low as it has been.

Yes, honey is honey, and worth money, this year. We are glad the price has gone up to something near where it ought to be, and we hope it will remain there. Of course, when nearly everything else rises in price honey would naturally go up some, too, even if there was a large crop. But now that it brings a good price, every effort ought to be made by producers to keep it there. It will help, next year, to be careful not to rush the whole crop into one city, and all at the same time. A more even distribution will help wonderfully to sustain prices. Right here is a place where the honey-producers themselves can help their own interests if they really care to do so.

Removing Honey Without Bee-Escapes.—In the Bee-Keepers' Review Critic Taylor quotes F. A. Snell as saying, "Before the invention of the bee-escape there was no way to take off honey without demoralizing the bees, unless one waited until cool weather." Mr. Taylor thinks this would be deplorable if true, but he has not found it to be true. He says, "If all *unnecessary* handling of bees during times of a dearth of nectar is avoided, all necessary handling with judicious management may be done without educating the bees up to the point of making annoying attempts at robbing." He says *rapidity* is the key, two working better than one—one with smoker and brush, the other to do the handling, stopping for a time when the bees show undue excitement. He goes to the other extreme from Mr. Snell, and says, "As a rule a bee-escape is a nuisance."

Probably there are differences in persons as well as localities. Mr. Snell might be told that tons upon tons of honey were taken before the day of escapes, and without demoralizing the bees, and that many times in hot weather a super of honey may stand exposed for hours without starting robbing. On the other hand, while Mr. Taylor and other veterans find no use for an escape, to others, probably to the great majority, it has been a boon.

Honey for the Complexion.—F. L. Thompson, in the Bee-Keepers' Review, translating from a foreign bee-paper, gives this:

"Herr Maurus says that Roumanian girls often mix honey with water for washing face and hands, and affirm that it produces a very fine complexion."

Undoubtedly it would work in the same way on the complexion of our American girls, should any of them require it. Surely, it is an inexpensive remedy.

Getting Bees Ready for Winter.—In the October Progressive Bee-Keeper, G. M. Doolittle gives the following directions for preparing bees for winter, especially as regards the matter of food:

By the time this number reaches the different readers, all colonies of bees should be ready for winter, unless in the most extreme Southern States. Are they thus ready? is the question each should answer. Fearing that some may not be (from the many letters I receive telling of the poor season, and that they will be obliged to feed), I am led to urge any who have not attended to this matter of winter preparation to do so at once. And I am askt to tell what to feed where stores are lacking, and the person has not enough to go around. In such a case I know of nothing better for winter feeding than the following:

Take any tin, iron or copper vessel of suitable size, and put therein 15 pounds of water, placing the vessel over the fire until the water boils, when 30 pounds of granulated sugar is poured in, stirring briskly while slowly pouring, so that it may not fall in a mass to the bottom of the vessel and burn it before it is dissolved. Having stirred until all danger of burning is over, allow it to remain over the fire until the whole begins to boil again, when the vessel and contents are set from the fire and five pounds of extracted honey stirred in. As soon as it is so cool that you can bear your finger in it, it is ready for the bees, and can be fed in any of the many good feeders in use, or you can provide a feeder by using any pan, basin or can you may happen to have, always using some grass, shavings, corncobs, etc., for a float to keep the bees from drowning.

The honey is put in the feed to keep it from turning back to sugar again, and is the only sure thing to keep thick sugar syrup in the liquid form that I know of.

A Cure for Prejudice Against Bees.—Quite frequently instances arise where certain neighbors of bee-keepers become jealous, or have some differences of opinion which cause them to take steps to get the bees out of the neighborhood. In the Agricultural Epitomist of recent date we find the following suggested cure for such prejudice or jealousy:

Writing from Iowa a subscriber objects to a near neighbor's bees, on the ground that they injure his grapes every year. He thinks that there should be a law to prevent people from keeping bees. This is an old question, and one

that will probably never be settled, tho it has been pretty well settled in the minds of the majority of people who have given the subject serious attention. The majority do not believe that bees injure fruit, and the majority believe that bees are of the greatest utility in pollenizing fruit. We think that the cure for the belief of our correspondent will be found in keeping bees himself.

We have noticed that when people who did not like children, came to have children of their own, they lost their prejudice against the little people who once worried them so much. We recommend the cure to the bee-hater. It will save him lots of worry, and add to his life. The only place in which we thought bees were intruders and trespassers has been in the city, and even there they did not do much harm.

We believe the above is a pretty good suggestion, and well worth trying. Suppose you have a neighbor who objects to bees near him for some unreasonable reason. Just try in some way to get him interested in bee-keeping and to own a colony or two. After he has had them a season or so, and eaten some honey produced on his own place, and by his own bees, the chances are that he will no longer object to bees, even should he later discontinue keeping them himself.

Honey Shows in England are made more of than in this country. Nearly every number of the British Bee Journal has some mention of them. A somewhat recent number of that journal has for its editorial leader, "The Final Honey Shows for 1899." The British and Colonial Industrial Exhibition at Manchester lasts four weeks, where $75 in prizes is offered bee-keepers with advertisement cards allowed on the exhibits after judging. A little earlier, at the same place, was held a show in connection with the Grocery Trades' Exhibition, in which it seems there was open competition for master grocers only, and nothing but British honey allowed.

Then there is the Grocery Trades Exhibition in London in October, and perhaps most important of all the Dairy Show, Oct. 17 to 20. The British Bee Journal earnestly urged an exhibit at this show from every county in the kingdom, which it thinks would greatly assist in singling out the best honey-districts in the kingdom. The probability is that on this side the water some of the bee-keepers who are quietly working away in the best honey-districts, would not care to have those "best honey-dristicts" too widely advertised.

The Weekly Budget

Mr. Wm. Couse, Secretary of the Ontario Bee-Keepers' Association, we regret to hear, is suffering from an attack of typhoid fever. We trust he may soon fully recover.

* * * * *

Rev. E. T. Abbott, of Missouri, writing us Oct. 13, reported the death of his father, Oct. 11, in St.Joseph, Mo., at the age of 82 years. He had been ill for quite a while, so the end came not unexpected.

* * * * *

Hon. J. M. Hambaugh, of San Diego Co., Calif., reported in the American Bee-Keeper that that State produced 3,750 pounds of honey in 1870, and 3,500,000 pounds in 1876. A pretty big gain in only six years.

* * * * *

Mr. E. M. Storer, a veteran bee-keeper of southern Georgia, has disposed of his interests there and sailed for the island of Jamaica, taking a position with the Jamaica Bee-Supply Co. So reports the American Bee-Keeper.

Mr. Frank H. Drexel, of Montrose Co., Colo., sends us the following clipping, with the remark, "You might perhaps need it in your business:"

"Good morning. Have you paid your subscription this year? Perhaps you owe for last year, or several years, or may be for job work or advertising. Now, you understand, we don't need money, for we have millions—to get; but it is really an imposition on our part to let people go on carrying our money around when we are so strong and healthy and abundantly able to bear that burden ourselves. For this reason we ask everybody who has any of our money in his possession to leave it at the office, or send it by mail, express, freight, or any other old way, just so it gets here. Silver and gold are heavy, and it would be a matter of life-long regret if any one should get bow-legged carrying it around for us."

Well, we don't exactly need the above paragraph, but, really, we know right where we could put a thousand dollars or so, if some good spirit would move those in arrears to send it in. We are quite willing to endure the burden (?) of taking care of the money.

* * * * *

Editor Leahy, of the Progressive Bee-Keeper, has this paragraph in the October issue of his paper:

"Following the lead of Bro. York, we have obtained permission from the board of directors of our public schools to address the scholars on the subject of bee-keeping. We will procure a hall that will seat all the children and the teachers, and each teacher, some afternoon in November, will bring his or her pupils to this hall where the address will be delivered."

That's all right with the exception that November may be a little late to have the bees on exhibition. It helps much to have the bees before the children when talking about them and their work in the hive.

* * * * *

Why Not Deal Direct with the manufacturer when you can, pay cash for what you buy, and obtain the goods at wholesale prices—be your own agent? The Edw. W. Walker Carriage Co., of Goshen, Ind., manufacture a full line of vehicles, and sell them direct to the consumer at wholesale prices. Letters received by them from users of their goods contain the strongest expressions of satisfaction and endorsement. Their catalog is free, and will be promptly mailed by addressing Edw. W. Walker Carriage Co., 50 Eighth St., Goshen, Ind. Always mention the American Bee Journal when writing them, if you please.

* * * * *

Sharp as a Bee-Sting.—In the Youth's Companion a story is told of a lord and a clergyman who were once driving together, and past the city jail. The lord turned to his companion and jokingly said:

"Where would you be, sir, if that jail had its due?"

Without a second's hesitation his companion smilingly responded:

"Riding alone, I fear."

* * * * *

While on a Brief Visit to Chicago—that busy, up-to-date and even ahead-of-time Western Bee-Hive—recently, it was the privilege of our secretary-treasurer, Mr. H. Yeigh, to shake hands and exchange greetings with Mr. George W. York, editor and publisher of the American Bee Journal. Mr. York deserves the success he has gained by hard and intelligent work.—Canadian Bee Journal. Thank you.

* * * * *

Dr. C. C. Miller past thru Chicago Oct. 17, on his way to the annual meeting of the Illinois Presbyterian Synod at Joliet, and called on us for two hours. He reports a comb-honey crop of about 6,000 pounds this year, from 140 colonies, spring count, and an increase of about 150 colonies, thus making his three apiaries total about 300 colonies. The Doctor is looking well.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

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Cork Bee-Hives have been used to some extent in Europe, and at one time were spoken of very favorably. According to late reports in Leipziger Bztg, the cork bee-hive is a failure. When cemented together as in the walls of the hive, cork is not a good non-conductor of heat, making the hive hot in summer. Dampness makes great ravages, the walls finally tumbling down.

Keeping Drones in the Fall is a topic in which Mr. Doolittle gives the advice in the Progressive Bee-Keeper to mass the combs having droue-brood with adhering bees iu a pile without a queen. Dr. Mason, in the Bee-Keepers' Review, thinks the advice excellent for some localities, but in his own locality there is no need to be at so much trouble, where bees gather enough to keep up brood-rearing till the middle of October.

Diseased Brood is making trouble in New York State, according to an article in Gleanings in Bee-Culture, by Capt. J. E. Hetherington, but it seems uncertain whether it is foul brood, pickled brood, or something else. He says: "On the surface of things, from facts presented, one might almost conclude three or more diseases existed iu the same locality." He is satisfied that the preseut disease has not the distinct characteristics that existed iu the foul brood that raged in the days of his early bee-keepiug iu the time of Father Quinby. The editor says that as nearly as he can find out this new diseased brood, while similar to foul brood, lacks the peculiar ropiness aud the glue-pot odor, the odor, when noticeable, being of a sour,

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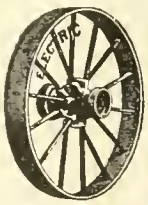

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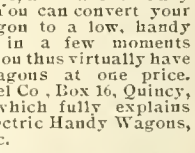

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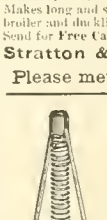

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yeasty, fermented character. He then adds:

"This peculiar disease (pickled brood we will call it) will go thru an apiary and then disappear of itself, even when no treatment is administered. It seems to be somewhat contagious; but, like influenza and other maladies of a like character, it leaves the patient (the bees) somewhat the worse for wear."

Planting Trees for Honey, according to "Rambler," in the Bee-Keepers' Review, is not an altogether hopeless enterprise. Many a hillside has been made barren by the woodman's ax, the springs and trout-brooks drying up for lack of the trees to shade them, and where the land is not too valuable for other purposes the replanting of trees may again restore the springs and brooks, with advantage to the soil below. The Government has come to the rescue in California, large tracts of mountain lands being set apart as Government Parks.

Clipping Queens vs. Queen-Traps.—Dr. Mason says in the Bee-Keepers' Review that the only thing that makes a queen-trap of value is that the presence of the queen in the trap shows that a swarm has issued. But even with clipt queens, he thinks there are certain conditions that make queen-traps desirable, as when colonies are kept upstairs where the queen would be injured by falling 10 or 15 feet in case of swarming, or where hives are so close together that the returning clipt queen might get into the wrong hive.

Vitality of Foul-Brood Germs.—Critie Taylor, of the Bee-Keepers' Review, thinks Editor Root has neglected to note the experiments of Prof. Harrison, of Ontario Agricultural College, which experiments *seem* to support Mr. Root's position as to the need of long boiling; but says: "but there is another side, for even scientists must reckon with practical affairs;" and concludes, "There thus appears, so far, a considerable interval between practical results and the scientist's results. It remains for future investigations to explain and harmonize these apparent differences."

Drone-Cell Queen-Cups.—H. L. Jones, a queen-breeder of Australia, says in Gleanings in Bee-Culture that he cannot imagine how the progressive Yankees, with their love for labor-saving methods and short cuts, can prefer the artificially-made Doolittle cells to the ready-made drone-cells which he has been using, which are just as effective as the Doolittle cups. He has reared thousands of queens with the drone-cells and prefers them to dipt cells. Editor Root replies that with drone-cells the queen-cells must be started in a queenless colony (in which he is possibly mistaken), and that it requires little labor to make the Doolittle cups, 1,000 being only a day's work.

H. L. Jones' Plan of Clipping Queens is thus given in Gleanings in Bee-Culture:

"Grasp the queen by the wings, and place her on the top of your left fore-finger, which she will eagerly grasp; then bring your thumb down on her legs, and you will have her as securely as if in a vise. There will be no danger of her legs getting between the scissors, which should be slipt under the longer wing on only one side. The whole operation takes but a few seconds, and the queen can be liberated right on the combs by simply taking the weight off her legs, and she hardly knows that she has been interfered with, as her delicate body has not been toucht."

Rambler's Scale.—Rambler describes in Gleanings in Bee-Culture his scale for weighing hives and bees that he constructed at an outlay of 10 cents and some muscle. A platform large enough to hold the hive is suspended by ropes at one end of a pole sufficiently strong, stakes being driven in the ground about the place of

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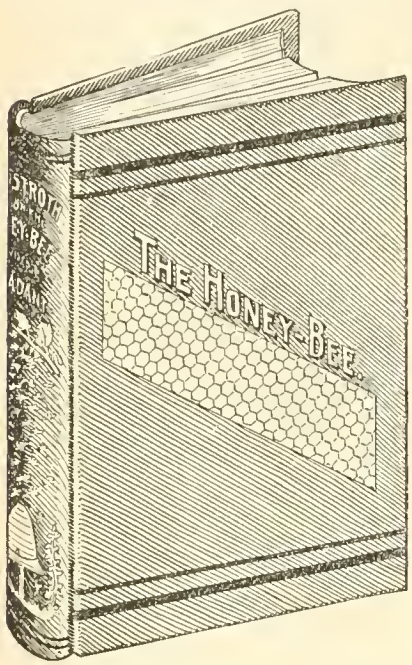

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the hive so the wind will not blow the bees about too much. At the other end of the pole is hung a box which is filled with stones to balance the hive so as to swing as high as possible. Then the 10-cent balance is adjusted to the weight-box, and every pound of weight shown by the balance means so much weight of gain in the hive. If loss is to be shown, then enough stones must be taken out of the box so the hive shall show a weight of six or eight pounds.

Getting Unfinisht Sections Cleaned Out.—A Stray Straw in Gleanings in Bee-Culture is as follows:

"I put 46 supers of unfinisht sections in the shop cellar, piling them crosswise, and then opened the door about Oct. 1. The weather was fine, and it took the bees about two days to clean them. Combs gnawed a little, but not seriously."

Editor Root adds this comment: "This or a similar method is the only practical way of emptying out unfinisht sections. They may be piled in stackt-up-hives with a small entrance, or in a dark cellar, where it takes the bees a little time to find their way to the honey. If I am not mistaken, nearly all the largest comb-honey producers use either one or the other method; but you will remember that it was opposed pretty vigorously by some of the leading lights at Philadelphia, on the ground that it has a tendency to incite robbers, and that bees once robbers are always robbers. We have tried the plan here a good many times, and I do not see that bees are any the worse off when it is over with than when they begin."

GENERAL ITEMS

Report for the Past Season.

Last fall I put into winter quarters 79 colonies, and lost 23 in wiutering, two being queenless. I commenced with 54 colonies last spring, and increast them by natural swarming to 67, which are in fine condition for wintering. I got 3,300 pounds of extracted honey, 112 pounds of finisht sections, and 300 pounds of comb honey not finisht, but salable at 10 cents a section. Honey sells like hot cakes at 8 cents for light, and 7 cents for amber extracted; comb honey, 15 cents. WM. SEITZ.

Dodge Co., Wis., Oct. 14.

A Good Deal of Swarming.

Bees did very poorly the past summer. There was no surplus honey. I had five colonies last spring, and now have 15. One colony did not swarm at all, and three swarms I put into the hives with the others. It seems to me that is a good deal of swarming for four colonies. J. CAMP.

Harlan Co., Nebr., Oct. 14.

Bee-Keeping in Chili.

Permit me to say in reply to the article by Mr. Juan Dupont-Lafitte, that while I find a general idea of Chilian bee-culture quite clearly conveyed therein, I feel it a duty to offer some comments on certain statements there given.

Owing to the limited time that Mr. D.-L. has been among us (as it is only some three years since his arrival in Chili) it is not improbable it is difficult for him to obtain reliable information in regard to all branches of bee-culture in this country.

He says Italian bees were introduced into this country in the year 1865, when, in fact, it was in 1834, some 25 years before their introduction into the United States.

So far as my information goes, in the year 1865, Mr. Vincente Chuecas owned an apiary of 640 colonies, 310 being in box-hives, and 150 in frame hives of the German

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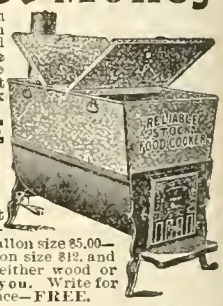

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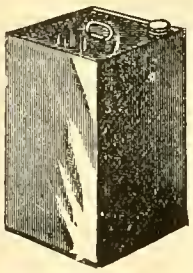

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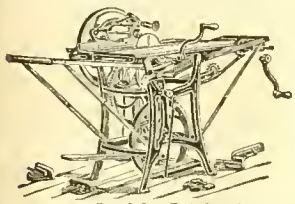

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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis.

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style, which were a sort of box like the Harbison hive, but not exactly so.

Mr. Chuecas is still alive in Santa Fe, near this town, tho he does not practice bee-keeping now, as he is engaged in other agricultural business. He says he gave up bee-keeping on account of the low price of honey and wax in those times, say $3.50 or 44 pence, for honey, and $20 for wax, per quintal of 46 kilos—equal to 100 pounds.

In 1888, another bee-keeper, Mr. Alfrede Duffey, started bee-keeping with a colony of bees in a Dadant-Quinby hive, and his apiary numbered last season 76 colonies, all in Dadaot-Quinby hives.

By this you will notice that Mr. D.-L. has been misinformed, and that frame hives were known in Chili much earlier than he thinks.

Regarding honey-yielding, I do not agree with Mr. D.-L., and from my own experience I can say that my crops for the past 3 years have been an average yield of 134 pounds per colony, and I have had colonies which have given the maximum of 182 pounds.

I use the De Layens hive with 20 frames $16\frac{1}{4}$ inches deep by 13 inches wide, and tho Editor D.-L. considers deep frames inconvenient for the climate of Chili, I have been able to winter my bees successfully during three years, and not a single colony has been lost during winter nor starved in early spring.

The cinnamon tree is placed by Editor D.-L. amongst the representatives of the Chilian flora, but this tree is unknown to us. What we have and Mr. D.-L. refers to, has nothing like the cinnamon tree, his mistake coming from the likeness in name in the Spanish language, i.e., Canelo (Drymis chilensis) and Canela (cinnamon-tree bark).—R. A. Sanhueza, in American Bee-Keeper.

Crop Shorter than for Years.

The honey crop in this part of the country is shorter than for many years, but my 30 colonies are filling up nicely for winter from aster. C. H. MAY.

Page Co., Va., Oct. 13.

Results of the Season of 1899.

The following is my report for 1899: I started in the spring with 43 colonies, 30 of them in good condition and the balance from fair to very weak; five were queenless. They began to swarm June 10 and kept it up until July 9, and then they stopt swarming until some time in August, having increast to 77 colonies.

I had 30 colonies from Blue Mounds, Wis.,

CHEAP FARM LANDS

Located on the Illinois Central R. R. in

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And also located on the Yazoo & Mississippi Valley R. R. in the famous

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Alfalfa Clover	60c	1.20	2.75	5.00
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Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

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J. M. Jenkins, Wetumpka, Ala.

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23 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **23** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,

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the first consignment arriving July 28, which consisted of seven colonies. I put all of the colonies shipt this season on empty frames with foundation starters one-inch wide, and they filled their hives for winter.

I have taken 2,700 finisht sections, and have about 1,300 unfinisht to extract. My bees did nothing after Sept. 1, as the weather was cool and cloudy the most of the time. We have had fine weather here so far in October, but nothing for the bees to do except a little pollen-gathering.

ELMER C. NOLAN.

Midland Co., Mich., Oct. 12.

Not One-Fourth of a Crop.

Bees have not done well here this season. We will not have one-fourth of a crop. The spring was too wet and cold, with continued late rains. We hope for a better season next year. G. D. LITTOOY.

Pierce Co., Wash., Oct. 12.

Convention Notice.

Connecticut.—The Connecticut Bee-Keepers' Association will meet at the Capitol at Hartford, Wednesday, Nov. 8, 1899, at 10:30 a.m.

Waterbury, Conn. MRS. W. C. RILEY, Sec.

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ANY KIND OR QUANTITY, SO LONG AS IT'S PURE...

If you have any Extracted Honey for sale, please mail us sample, and state quantity, how put up, and lowest cash price wanted delivered in Chicago. Address,

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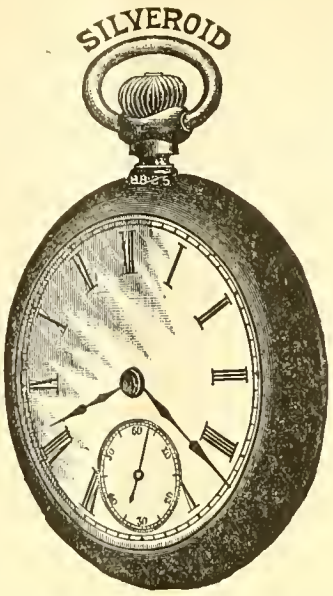

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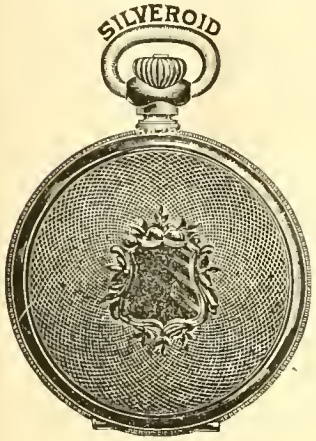

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No. 146 is a Gentleman's genuine open face Elgin, Waltham, or Hampden, the movement nickel-finisht, compensation balance, straight line escapement, quick train, patent safety pinion, double brace main-spring, Breguet hair-spring. The Case is Silverine with screw front and back, and of good weight, thus making a perfect, dust-proof watch.

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No. 143 we will send prepaid, by express, to any address for $8.00; or we will give it free as a premium for sending us 16 new subscribers for the American Bee Journal for one year at $1.00 each; or we will club it with the Bee Journal for one year—both for only $7.50.

We believe we have never offered any premiums to our readers that we think will give the satisfaction that these watches will. They are not cheap "clocks," but really valuable watches that will wear well, run all right, and be worth much more than is paid for them. Here is a chance to make a gift to some boy, girl, young man or young lady. Everybody ought to have a good watch. Address,

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 18.—The market is active and full quotations are obtained. A little fancy white sold at 10c, but sales are chiefly at 15c for the best grade; white, not strictly fancy, brings 13, 14 and 15c; amber grades range from 10@12c, and dark, 9@10c. Extracted, 7@8c for white, according to body, flavor and package; amber, 7@7½c; dark grades, 6@7c. Beeswax, 26@27c.
R. A. BURNETT & CO.

KANSAS CITY, Oct. 19.—The demand for comb honey is fair, and supply light. The supply of extracted is light, and demand good. We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13½c; No. 2, 12½@13c. Extracted, white, 7@7½c; amber, 6@6½; dark, 5@5½c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:
Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CINCINNATI, Oct. 9.—The demand for honey, both comb and extracted, is very good, with prices much better than a few weeks ago.
Fancy comb finds ready sale at 15@16c; darker grades are hard to sell at any price.
Good demand for all grades of extracted. White clover and basswood brings 8@8½c; amber and Southern at from 6@7c. Good demand for beeswax at 26c. C. H. W. WEBER,
Successor to Chas. F. Muth & Son and A. Muth.
We do not handle honey on commission—we buy for spot cash only.

BUFFALO, Oct. 20.—Supplies of strictly fancy 1-pound combs are lightest for many seasons; such are held firmly at 14c; few sales, 15c; No. 2, from 12c down. We do not notice any extracted in market. It is wanted at from 5c to 7c per pound. Beeswax, from 28@30c per pound for fancy pure yellow. BATTERSON & Co.

ALBANY, Sept. 26.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

BOSTON, Oct. 13.—We quote: Fancy No. 1 white in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c. Extracted, light amber, 7@8c; amber, 6½@7½c.
But little new to note in this market on honey. The supply still continues to be very short while the demand is naturally a little lighter, as the retail trade is not quite up to higher prices, still with the light stock they must evidently come to it. BLAKE, SCOTT & LEE.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices. White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12@13c; No. 1 amber, 11@12c; fancy dark, 9@10c; White extracted, 8@8½c; amber, 7@7½c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth
40Atf 2146-8 Central Ave., Cincinnati, O

Wanted! Your HONEY

We will buy it, no matter where you are. Address, giving description and price,
34Atf THOS. C. STANLEY & SON, Fairfield Ill.

Latest Improvements. Perfect Goods.
Very Reasonable Prices.

Hives, Shipping-Cases Sections, Extractors, Etc.

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The New Champion WINTER-CASE...

which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO.,
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BEES **QUEENS**
Smokers, Sections, Comb Foundation And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

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Or, Manual of the Apiary,

—BY—

PROF. A. J. COOK.

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A description of the book here is quite unnecessary—it is simply the most complete scientific and practical bee-book publisht to-day. Fully illustrated, and all written in the most fascinating style. The author is also too well-known to the whole bee-world to require any introduction. No bee-keeper is fully equipt, or his library complete, without THE BEE-KEEPERS' GUIDE.

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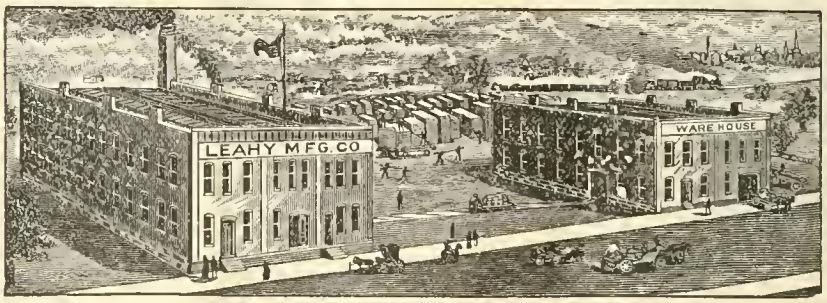

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AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., NOVEMBER 2, 1899. No. 44.

BIOGRAPHICAL.

Mr. Wm. A. Selser and Family.

SEVERAL years ago there called at this office, while unfortunately we were away, a gentleman from the East who left the name of "Wm. A. Selser." We had heard of him and regretted our absence from the office, especially when told by one of our employees that he seemed to be such a very pleasant man.

About two months before the Philadelphia convention, when again passing thru Chicago, Mr. Selser dropt in to see us for a while, and once more we were not in, but returned after our caller had waited a half hour or so. He could stay only about an hour longer, so we put in the time well in getting acquainted. But it seemed as if we had always been friends, and it was with much regret on our part that we had to separate so soon. And yet it was to be only a short time until we should meet again, as Mr. Selser exacted a promise that when attending the convention in Philadelphia we would be his guest.

And so, according to arrangement, at the close of the first evening's session of the convention, Sept. 5, Mr. Selser called together those whom he had expected to entertain, and we all took the 10-mile ride out to the beautiful suburb of Philadelphia where he lives. It was perhaps 11 o'clock when we arrived, and then met Mr. Selser's charming wife, who was "keeping a light in the window," as it were, for her beloved and his friends. And more than that, everything was ready for us all to sit down to the table and partake of a luscious water-melon and lemonade before retiring. On one or two evenings peaches and cream were served—and such peaches and cream—why, our mouth waters even now when we just think of their deliciousness.

Perhaps before going further we ought to give a few personal notes concerning Mr. Selser and his family.

William A. Selser.

Wm. A. Selser was born Sept. 22, 1859, in the heart of the old city of Philadelphia, near the historic Independence Hall. He attended the common school, and then Philadelphia College, leaving the latter institution on account of sickness at the beginning of the closing term. He took special interest in zoology, particularly insects, which included bees, of course.

Mr. Selser learned the trade of tanner of morocco leather, but in 1877 entered a firm of fruit importers with his brother. In 1883 he left the fruit business and formed a partnership of Selser, Meurer & Co., for the manufacture of morocco leather. They did a business amounting to three-quarters of a million dollars a year, and Mr. Selser kept bees as a pastime.

In 1893, Mr. Selser closed the morocco-leather business on account of the rascality of others, and embarkt in the bee and honey business as a specialty, taking the Philadelphia branch of the A. I. Root Co. in connection therewith.

In 1889 Mr. Selser married Miss Pauline Hallowell, of Arlington, a daughter of one of the old Quaker families of eastern Pennsylvania, the descendants of Wm. Penn. Then he built a fine home at Jenkintown, moved there the same year, where a bright little boy was given them to love for one year, when he was taken from them by the Giver. Now a dear little girl of six years is left to cheer their daily life—Margaretta, whose picture helps to grace the next page. She and the writer became good friends, and it wasn't the easiest thing to tear one's self away from such a loving and lovely child as Margaretta.

Before passing on, we must also mention that Mr. Selser's sister and mother are also in his family, all being devoted members of the Baptist church. Margaretta's grandma is a sweet old lady, reminding us not a little of our own dear mother whom it was our great pleasure to visit in Ohio on our way back from Philadelphia.

Now as to Mr. Selser's bee and honey business: We believe he has the most complete honey-bottling works in the world. It is located right with his apiary (a picture of which was publisht on page 599), and perhaps 80 rods from his home. He uses two sizes of bottles—the one-pound and the half-pound, the same shape as the Muth bottle or jar. The honey is put in hot, then corkt, sealed air-tight with a special kind of sealing-wax, and then a tinfoil cap put on. A black label with gilt letters completes the job, and it makes a very attractive

Mrs. Selser.

package, indeed. The one-pound size retails for 25 cents, and the half-pound for 15 cents. Selser's honey is in great demand in the cities of Philadelphia and New York, Camden, and all the towns between. Grocers handle it exclusively, it being delivered to them by three large and elegantly painted and lettered honey-wagons, which are kept going constantly from Sept. 15 until the following May.

The honey for the season's trade is all bottled in one month—August—it requiring 24 hands to do the work, but Mrs. Selser herself does all the labeling. Mr. S. says she can label as many bottles in a day as any three other girls, and do it better. There's a helpmeet that's worth her weight in—well, gold is too common to express it, so we'll let Mr. Selser fix her value.

Mr. Selser bottles only the finest white clover honey for his best grocery trade, and by adhering strictly to this rule he has built up an enormous demand, taking about 40,000 pounds a year to supply it. Quite a lot of honey to bottle, isn't it?

All the honey bought by Mr. Selser is carefully analyzed before using. And he is fixt to do that work, too, as he owns a polariscope costing $250, a delicate balance or scales worth $75, and all the paraphernalia of a complete chemical laboratory. You couldn't fool Mr. Selser on honey. He's an expert at analyzing it, and can spot any adulteration every time.

We are glad that Mr. Selser is succeeding in the honey-selling business. He deserves all the success with which he is meeting. But what he is doing in Philadelphia, it seems to us, could be done in almost any large city. Of course, it requires lots of energy, continual pushing, familiarity with bees and honey, and above and beyond all the finest grade of extracted honey. With the right man, the right methods, and the right honey, we believe success is certain almost anywhere. THE EDITOR.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 677.]

Dr. Mason—Figures such as Mr. Root has been giving us are not uninteresting, as he has intimated. I doubt not many bee-keepers have often wanted something approximately correct on this very subject, and these statistics are full of interest and meaning, and will give us something to go by when we want to talk to men in authority, such as legislators and other officials, and will help us to speak of the importance of our industry with some degree of accuracy.

The Secretary's Report.

Mr. President:—Aside from the ordinary work of the secretary, I have but little to report. When one of our members gets into trouble with his neighbors, commission men, or with "the powers that be" he generally applies to our General Manager for advice and help, but occasionally one writes to the Secretary, instead, and where I have thought I could be of service and accomplish what the General Manager might, I have not bothered him with the matter, but occasionally I have to pass the correspondence on to him and advise the complainant accordingly.

During the past year there have been two complaints about commission men made to me, one of which was satisfactorily adjusted, and the other is still unsettled, but there is hope of its being adjusted.

Complaint was made to me of probable trouble with a neighbor who claimed that the bee-keeper's bees were a great annoyance to him. I referred the matter to General Manager Secor, and I believe the trouble was averted.

During the time since our convention at Omaha last year, I have written 192 letters and 114 postal cards regarding matters relating to the Association, at an expense for postage and stationery of $7.41; express charges and telegram, 60 cents; printing programs, $5; total paid out, $13.01.

I received for membership fees since last financial report to General Manager, Dec. 1, 1898, to Sept. 5, 1899, $18; for programs and postage, 40 cents; total received, $18.40. Balance in the hands of the Secretary, $5.39.

Owing to the kindness and generosity of our friends, the members of the Philadelphia Bee-Keepers' Association, we have this nice hall, our beautiful badges, this fine piano and good music all free of charge, and you can all testify as to the thoro and generous manner in which our "inner man" has been provided for; and having had much correspondence with Mr. Hahman in making arrangements for this convention, I wish to congratulate the Philadelphia association on having so active and efficient a secretary to represent and care for its interests; and I wish also in the name of this Association, to thank Mr. W. A. Selser and Mr. W. E. Flower for efficient services rendered in making this convention a pleasant and profitable one.

A. B. MASON, *Sec.*

Mr. Selser—From every hair of my head to the soles of my feet I am interested in bee-keeping, and I want to caution every honey-producer to be *very careful* about sending honey to commission men. They can very rightly say that honey has dropt in price. When you get quotations from them, and they say the price has dropt, don't be in a hurry to send your honey to them, altho they might be honest.

E. R. Root—You see by the Secretary's report that this Association stands ready to look after the interests of its members, and to defend them in their rights; Dr. Mason puts in his "bluster," and that settles it.

Dr. Mason—I don't like the way "Ernest" talks about my bluster. I *don't* bluster when trying to help our members when they get into trouble. I try to write in a brief but firm manner. I *dont threaten*. I have one case on hand now to settle, and the party has promist to settle.

Mr. Niver—Referring to Mr. Root's figures, I would like to carry it a little further. The average is $33⅓ for each bee-keeper. I advise that we all go out of the business; some bee-keepers may have only one hive.

Mr. Selser—Out of 35 bee-keepers I am the only one who sells honey in Philadelphia.

Mr. Poppleton—I judge that this statement going out will give an erroneous idea. If the statement can be separated, I think it would be a good plan.

Mr. Root—These figures I got from the books. I was figuring on bee-keepers and farmers. The only accurate figures are regarding the sections.

Mr. Abbott—I sold ten carloads of goods, and I judge that not half the goods went to bee-keepers. Bee-keepers are scattered all over the United States.

The convention then adjourned until 1:30 p.m.

SECOND DAY.—AFTERNOON SESSION.

The afternoon session was called to order by Pres. Whitcomb.

As a preface to a paper written by Vice-Pres. C. A. Hatch, of Wisconsin, and read by Mr. York, Dr. Mason read the following letter:

Margaretta Selser.

DEAR DR. MASON:—I have prepared the enclosed article on honey-exchanges, but after it was prepared the thought occurred to me that it seemed rather terse and dogmatic in style, as if coming from one having "authority to speak," and as most of those who hear the paper will probably be entire strangers to me, perhaps a little explanation or showing of my right to speak would not be amiss, but to embody it in the article itself seemed to me rather on the line of boasting, and I thought it would be better to write you individually, and then let you offer any prefatory or explanatory remarks you see fit.

My experience with exchanges has been quite extended and varied for one person, having been a member of the Maricopa Co., Ariz., exchange, where I put a crop of 70,000 pounds into the exchange; also a member of the California exchange, with a crop of 28,000 pounds; also the Colorado exchange, of Denver, with a crop of 8,000 pounds, mostly comb; also a local fruit association here in Wisconsin.

So you see I have had opportunities not falling to the lot of many to know something of the good and bad points of exchanges. I believe in them thoroly, and these criticisms are not made to destroy confidence, but to help build on a surer foundation. C. A. HATCH.

The following is Mr. Hatch's paper, on

Why Bee-Keepers' Exchanges Fail.

Trying to cover too much territory is one of the mistakes most common in organizing bee-keepers' exchanges; trying to do too much business, as, for instance, buying, selling, and manufacturing, when, perhaps, the whole membership are entirely without experience in any of these lines.

It would be much like a young man grown up and educated in the city, assuming to run a large farm; or a farmer's son with no experience trying to run a large commercial establishment. Practical knowledge comes by practical experience, and by practical experience only. Therefore, let us walk before we run, and learn to manage small affairs before we assume control of large concerns.

Making too many rules and restrictions is another hindrance to success. These may be well enough to catch rogues, but if your members are not honorable enough to act in a straightforward, honest business manner, restrictions, penalties, fines, etc., are poor substitutes for business integrity.

The most successful association I ever was a member of had not even a constitution nor by-laws; no officers were ever formally elected, no salaries paid, and yet it workt well for years, and is yet working. True, we had only five or six members, and therefore it was more easily managed than a larger number would have been. When supplies were to be bought a consultation was held, and each agreed to take a given amount, and one acted as purchasing agent, and actual cost and expenses were promptly paid by the members.

When a shipment of honey was to be made, one, not always the same person, acted as shipping agent. Each man's consignment was markt with his name, and the commission house, if sold on commission, or purchaser, if sold outright, was sent a list of the shipment, giving owners' names and amount sent by each, and the pay was sent direct to each shipper. This plan had two advantages—no taeasurer was needed, for there was no funds held in common; and it made each shipper responsible for his shipment, and his only. Perhaps this plan is not applicable to a large number of shippers and great extent of territory.

One of the elements of success was the fact of our being near neighbors, so that a consultation of all the members could be had in a short time, which would be entirely lacking in a large membership.

Large membership dues are a hindrance rather than a help, by debarring some that would be desirable members, but who think they cannot afford the expense. A membership fee large enough to cover cost of preliminary work, such as necessary printing, etc., and not with an idea of creating a fund, is all-sufficient, say $1.00.

Having dues like secret societies is much worse. One society of which I was a member had nearly $300 standing against its members for unpaid dues. This amount will be lookt upon by those owing it as so much money wasted, if called upon to pay up. And are they not right, for they have not received any use from the exchange, and therefore why pay any tax for its support?

Individual responsibility is the main thing in exchanges—the keystone that holds the whole arch in place—and the sooner the membership realize the facts that it is an organization "of the members, for the members," and that they are married to it for better or worse, the greater will be the success.

Members are too apt to put themselves in a hypercritical position, and criticise any and all acts of the executive board, as if it was their ordained mission to discover something wrong. This of itself creates an atmosphere of suspicion and mistrust, which is anything but helpful to the objects of the society. The probabilities are that the officers are having a hard enough time of it between the effort to get fair prices and the exactions of would-be buyers, without having those who should be their best supporters turn on them.

Let us be consistent. It is taken for granted that we have elected our best men for the responsible places, and after having elected them let us give them our unqualified support, for even a poor stick well supported may do better than a fine piece of timber with no support.

Stick together, whatever happens, and success is sure to be yours in the end. If a mistake has been made, make the best of it and try again. Condemn no man except for dishonesty or criminal neglect, and for such the sooner they are on the outside the better it will be for those left.

Have confidence in your particular exchange. Talk confidence to others, and see how soon it will be worthy of your confidence; and above all, show that your confidence is real, by putting all your crop into their hands, and not create suspicion by holding back part just to see how the thing works. It is sure to work well if you support it, and sure not to if you do not.

Do not be selfish, and want to run everything your way, but remember others want their way part of the time. Then after doing all this, do not expect every one you meet to remove his hat and bow down to a member of the Universal Honey Exchange; there are other enterprises in this world, and perhaps as huge undertakings as yours. And do not expect to control the universe—if you have your say in your little corner you will do well.

Railroads may be anxious to get your freight to carry over their road, but will hardly be willing to listen to your dictation. Rather learn a lesson from them, that a plausible, conciliatory manner is better than arbitrary measures.

To sum up: In starting, do not attempt too much—attempt only what you can carry thru. Do not have too many rules and regulations. Make the fee nominal, or nearly so. Do not work for profit, but to save expenses only. Be honest, be courteous, be careful, be confident, and, above all, be faithful to your society. C. A. HATCH.

Dr. Mason—There are two other papers in the same line that might be read and all discust together—"How to Conduct Successfully a Bee-Keepers' Exchange," by J. Webster Johnson, of Arizona, and one by Thomas G. Newman, on "Organization Among Bee-Keepers; If Desirable, Why and How Best Accomplisht?"

Mr. Johnson's paper was then read by Mrs. Miller, as follows:

How to Conduct Successfully a Bee-Keepers' Exchange.

A bee-keepers' exchange is simply another name for co-operation among bee-keepers. Bee-keepers are producers, and the history of business as it is, and has been, shows that successful co-operative business ventures are not very numerous, but there are some that are entirely successful, showing that when conditions are right, and good business judgment is used in conducting the enterprise, co-operation can be made a success and be very beneficial to those who are connected with it. Then let us see first what are the conditions necessary to success.

1st. Co-operative action must be necessary in order that the producers who propose to work together shall be able to make their industry pay its best. For instance, a dozen bee-keepers living near a large town or city where all of their product can find ready sale at prices as good as could be obtained in any other market, will find little incentive to join forces, because each can readily dispose of his crop to as good an advantage as he could thru a co-operative concern. On the other hand, a number of producers with no home market of any size, and living so far from other markets that shipments must be made in carload lots if the freight is not to consume the bulk of the proceeds, cannot only co-operate to their mutual advantage, but really must do so if they are to obtain the best results, or, in some cases, any results at all.

2nd. Don't attempt to cover too much ground; in other words, co-operation should be undertaken only along those lines where it is absolutely necessary. When a number of

men are working together, differences of opinion will arise as to plans and methods, and right here is where the danger usually lies in co-operation, hence the less the number of things that are attempted the less friction there will be. So I lay it down as a general rule to begin with in conducting a bee-keepers' exchange, have only two main objects, namely, supplying cans or other packages for the honey, and marketing the product.

Some might suggest that the exchange should also furnish the members with their bee-supplies, and in some places this might be feasible, but here in Arizona we tried it once and did not consider it a success. To do anything in this line, supplies would have to be bought in carload lots, and, outside of hives, not enough things are wanted each year to make up a carload. In this valley so many different kinds of hives are used that it was found impracticable to make up a car. So, as conditions are here, and as they are in most places where co-operation will be of any practical benefit to the honey-producers, I believe that an exchange should only attempt to supply cans and market the honey.

Wherever there are located a number of honey-producers who, combined, produce honey in sufficient quantities to ship by the carload, I believe that successful co-operation is not only possible, but is really necessary in order to attain the best results. These producers must, of course, be located close enough together so that they can get together occasionally to direct the management, and so that their honey can be concentrated at some central shipping-point without too much expense. Given these conditions, a successful bee-keepers' exchange is not only possible but necessary.

The advantages to be derived thru co-operation, where conditions are favorable, are so apparent that I do not deem it necessary to take the time to set them forth, so I will proceed to give the essential details for such an exchange.

HOW TO ORGANIZE.

The best form for the organization is probably an incorporation. The articles of incorporation should expressly provide that only honey-producers are eligible to buy voting stock in the company, and that whenever any stockholder ceases to be actually engaged in the production of honey his share or shares of stock should not be votable at any meeting of the company unless it becomes the property of some honey-producer. This provision keeps the management of the organization in the hands of those who are personally interested. Then it should be provided that no proxy voting be allowed. This may work a hardship occasionally, but in the long run will be best. Those who have not enough interest to be present when properly notified should not complain, and my experience and observation in co-operative organizations show me that it will be best to allow no proxy votes.

To overcome the possibility of "no quorum," it should be provided that the secretary shall give each member notice by mail several days before the meeting, and where such notice has been given, five members (or some other small number) shall be qualified to transact business.

No considerable amount of working capital is advisable. First, because but little is needed; and, second, because the ownership of apiaries changes so frequently, and it would complicate matters very much if each share represented a considerable cash outlay. The purchase of cans is the only call for a considerable amount of cash, and for this it is better to arrange to borrow what is needed than to complicate matters by having a large capitalization. For these reasons the shares of stock should be sold at a low figure, say $1.00 to $2.00 each, and a person should be entitled to buy and vote one share for each 50 colonies of bees he owns, and no bee-keeper owning less than 25 colonies should be allowed a voting share in the organization (altho the product of the small producers should be handled for them when desired).

This plan fixes it so that each member's influence in the management is exactly in proportion to his interest, and this I believe to be the correct principle. Where the "one man, one vote" idea prevails, the man who produces a couple hundred pounds (and perhaps sells that at home) has as much influence in the selection of officers and in controlling the business of the exchange as the man who produces 50,000 pounds. This is not right.

Meetings of the general membership should not be attempted often, as, besides the election of officers, little should be attempted by the general meeting except to decide upon the general policy and methods of doing the business. The important officers are the board of directors, five in number, and the secretary-treasurer, who is the business manager. The success of the exchange depends very largely upon the selection of the proper person for secretary and manager, as it will be necessary to allow him a good deal of discretion in conducting the business of the exchange. If the exchange covers a considerable scope of country, as it will in most cases, the directors will likely live some distance apart, and if the secretary is required to get the board together (which will usually take several days) before he can decide upon what action to take, a satisfactory business cannot be done. The board will have executive management, but the good judgment of the secretary must be trusted to a very large extent.

The secretary should be paid a fit sum, either per car of can of honey, or else so much per case, both shipt in empty, and, filled with honey and sent out, that is, handled so that his pay will be in proportion to the work done. A fund for meeting the running expenses of the exchange is raised by a charge of a few cents per car profit on empty cans furnisht, and a few cents per car of honey shipt. The number of cents per car will, of course, have to be regulated according to how much is paid the secretary, and what the other expenses are.

In the spring each shipper furnishes the secretary with an estimate of the number of cases of cans he will need for the season, if the crop is an average one. Then one or more cars of cans, according to the prospect for a crop, are bought and distributed proportionally to the shippers, as, for instance, if the total of the estimates be 5,000 cans, and 2,500 cases are bought, each one receives 50 percent of his order, and if the season is a good one more cans are bought later.

Some pay cash for their cans, but the majority get them on time, to be paid for out of honey shipt, paying whatever interest on the deferred payment that the exchange pays. Those getting cans on time sign a receipt which provides that the cans remain the property of the exchange until paid for, and agree to ship honey to pay for them, or pay the cash by the time the first shipment is made. This enables us to deliver the cans direct from the car, and so save all cost of storage, and has been found to be effective against loss.

MARKETING THE HONEY.

On the question of marketing honey, there will be differences of opinion as to the best plan, and no set rule can be laid down, but conditions and circumstances must be taken into consideration, and good business judgment be used. Some believe in selling only for cash, or its equivalent—on sight draft—at the point of shipping. Others believe that more money will be realized where shipments are made to reliable commission firms on consignment. Personally, I am of the opinion that this latter is the best plan, generally. There are times when as much can be realized by cash sales, but in general it may be said, I think, that under existing conditions more can be realized by selling on commission. In deciding this question we must consider not only present profit, but a market for future crops. One thing must be arranged for, no matter what may be the plan of selling, namely, to manage that all shippers shall receive the same amount per pound for honey shipt about the same time. I sometimes ship several cars at or about the same time, some of which sell more quickly than others, and some perhaps sell for more per pound than others. In this case, the first money received is paid prorata to all shippers, and when all returns are in, the average net price per pound is found and settlement is made on that basis.

Each shipper's honey is markt by having his initials on each case, and as each lot is weighed separately, each one gets paid for just what he ships.

As my paper is already longer than I expected to make it, I will close. The opinions set forth are drawn from an experience of several years in an association of bee-keepers here (in Arizona), and I trust that the ideas here brought before you may be of some value to our fellow bee-keepers in some places where the conditions are right for co-operated action among honey-producers.

J. WEBSTER JOHNSON.

[Continued next week.]

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

CONTRIBUTED ARTICLES

Some Big Honey-Yields Tabulated.

BY ADRIAN GETAZ.

THE following are some of the best honey-yields obtained, taking in the whole apiary :

Mr. Gregg—Arizona. 200 colonies. Yield per colony, 485 lbs. Kind of honey, alfalfa and mesquite.

E. France & Son—Wisconsin (home-apiary) 61 colonies. Yield per colony (1886) 117 lbs. extracted, basswood and clover.

Chas. Dadant & Son—Illinois. 87 colonies. Yield per colony, 141 lbs. extracted.

Chas. Dadant & Son—Ill. 400 colonies. Yield per col'y (1889) 113 lbs. extracted.

Mrs. Axtell—Illinois. 80 colonies. Yield per colony (1882) 217 lbs. comb.

L. C. Root—N. Y. 40 colonies. Yield per colony, 243 lbs. extracted (of which 102 lbs. per colony in 7 days.)

W. E. Thompson—Missouri. 7 colonies. Yield per colony (1890) 136 lbs. comb.

N. B. Baldwin—Utah. Yield per colony (1890) 200 lbs., mostly extracted.

F. McNay—Wisconsin. 175 colonies. Yield per colony (1886) 187 lbs. extracted. Increast to 230 colonies.

J. E. Brooks—Iowa. 4 colonies. Yield per colony (1886) 150 lbs. comb. Increast to 9 colonies.

Jas. Scott—Iowa. 88 colonies. Yield per colony (1886) 272 lbs. extracted. Increast to 109 colonies.

G. D. Black—Iowa. 50 colonies. Yield per colony (1886) 260 lbs. extracted. Increast to 120 colonies.

A. M. French—Michigan. 2 colonies. Yield per colony (1886) 244 lbs. comb. Increast to 7 colonies.

Wm. Malone—Iowa. Yield per colony, 215 lbs. for the 6 years (1881 to 1886) mostly extracted; average yearly increase of 100 percent.

Paul Viallon—Louisiana. Yield per colony, 200 lbs.

R. Wilkin—California. 416 colonies. Yield per colony (1887) 185 lbs. extracted.

E. France & Son—Wisconsin. (From 12 best colonies.) Yield per colony (1886) 164 lbs. extracted.

W. Z. Hutchinson—Mich. 50 colonies. Yield per colony (1886) 140 lbs., nearly all extracted.

O. O. Poppleton—75 to 100 colonies. Yield per colony, 110 lbs. during the last 10 years he was in Iowa.

J. M. Long—Missouri. 4 colonies. Yield per colony (1888) 250 lbs. comb. Increast to 30 colonies.

N. G. Adamson—Utah. 26 colonies. Yield per colony (1888) 196 lbs., $^2/_3$ extracted and $^1/_3$ comb. Increast to 48 colonies.

John Blodgett—Missouri. 30 colonies. Yield per colony (1888) 193 lbs. comb. Increast to 73 colonies.

L. A. Judd—Illinois. 5 colonies. Yield per colony (1888) 228 lbs., mostly comb. Increast to 20 colonies.

S. I. Freeborn—Wisconsin. 29,000 lbs. extracted and 500 lbs. comb. Average for the 4 years ending 1886, from 250 to 300 colonies.

Robert Quinn—Iowa. 150 colonies. Yield per colony (1888) 147 lbs., mostly extracted. Increast to 240 colonies.

R. H. Rhodes—Colorado. 35 colonies. Yield per colony (1885) 143 lbs. extracted. Increast to 50 colonies.

C. S. Adams—New York. 8 colonies. Yield per colony (1885) 200 colonies.

R. J. Lathers—Michigan. 4 colonies. Yield per colony (1885) 213 lbs., mostly extracted. Increast to 9 colonies.

J. G. Bandinger—Michigan. 8 colonies. Yield per colony (1885) 156 lbs. extracted. Increast to 30 colonies.

G. D. Seitz—New York. 36 colonies. Yield per colony, 277 lbs.

J. B. Case—Florida. (Apiaries moved to follow yield.) Yield per colony (1895) 420 lbs. extracted.

J. B. Case—Florida (home apiary.) Yield per colony (1895) 300 lbs. extracted.

R. C. Aikin—Iowa. Yield per colony for the last 10 years in Iowa (1881 to 1891) 100 lbs. (For the best year of the above period, 227 lbs.)

John Haskins—Missouri. Yield per colony (1889) 150 lbs.

V. H. Young—Wisconsin. 50 colonies. Yield per colony (1894) 140 lbs., mostly extracted. Increast to 82 colonies.

D. A. Wheeler—California. 900 colonies. Yield per colony, 133 lbs.
H. E. Wilder—California. 120 colonies. Yield per colony, 200 lbs. } Reported
Mr. Segars—California. 300 colonies. Yield per colony, 133 lbs. } in 1896.
Mr. Oderlin—California. 140 colonies. Yield per colony, 271 lbs. extracted.
Emerson Bros.—California. 300 colonies. Yield per colony. 160 lbs.
(The 5 above reports were probably the crop of 1895.)

J. P. Israel—Calif. 16 colonies. Yield per colony (1884) 662 lbs. Increast to 69.

T. O. Andrew—Calif. 400 colonies. Yield per colony (1895) 135 lbs. extracted.

John Fox—California. 140 colonies. Yield per colony, 214 lbs. extracted.

O. E. Harper—California. 74 colonies. Yield per colony (1895) 256 lbs. extracted. Increast to 154 colonies.

E. T. Flanagan—Ill. 35 colonies. Yield per colony, 186 lbs. Increast to 70 col's.

Mr. Hammond—Iowa. Yield per colony, 127 lbs. comb and extracted.

H. W. Funk—Illinois. 75 colonies. Yield per colony (1882) 247 lbs.

Eastern Iowa Bee-Keepers' Ass'n.—Average yield (1889) 212 lbs., nearly all comb.

G. B. Taylor.—45 colonies. Yield per colony, 143 lbs. comb. Increast to 70 col's.

G. M. Doolittle—New York. 69 colonies. Average yield, 167 lbs., mostly comb.

J. Z. Rhodes—39 colonies. Yield per colony (1895) 154 lbs., ½ comb ½ extracted. Increast to 150 colonies.

A Florida bee-keeper.—300 colonies. Yield per colony (1893) 100 lbs. (In Mangrove region.)

An Australian bee-keeper.—63 colonies. Yield per colony (1892) 750 lbs. Increast to 120 colonies.

Another Australian bee-keeper reported in 1895 that one colony gave him 1,250 pounds; another colony, 1,120, and several others averaged 1,000 pounds. It must be remembered that in Australia bees gather honey almost the whole year, that is, if the season is good, which is not always the case, for the same man says that in 1894 he had only about 75 pounds per colony.

The above are the best yields obtained for one season and for the whole apiary. The reports are not always explicit, and in some cases it is possible that only a certain number of the best colonies were taken into consideration.

Very seldom the report says whether it is spring count or not, but it may be supposed that it is spring count, at least in the majority of cases. It seems that 1886 was the best year recorded.

To the above I will add the following best yields per single colony reported, giving the apiarist's name :

Somebody in Texas—700 lbs., chiefly from horsemint.
Doolittle—N. Y. 300 lbs. comb in 1877.
" " 301 " "
" " 566 " ext'd in 1877.
G. L. Head—384 lbs. extracted.
R. C. Aikin—Iowa. 227 lbs. comb (obtained by removing the queen.)
B. Taylor—Minn. 265 lbs. comb (the colony did not swarm.)
N. B. Baldwin—Utah. 330 lbs. ext'd. (the colony did not swarm.)
L. C. Root—N. Y. 361 lbs. ext'd in 1870 (Some of L. C. Root's colonies gave each 200 lbs. comb also in 1870.)
J. Fennel—Ont. 300 lbs. comb in 1886.
A. B. Mason—Ohio. 250 lbs. extracted
C. C. Miller—Ill. 195 lbs. comb.
Dadant & Son—Ill. 450 lbs. extracted
Mrs. Harrison—Ill. 200 lbs. (120 lbs. from colony; 80 lbs. from swarm.)
Mr. Maley—Nebr. 718 lbs. extracted in 1882 (from Cyprian bees.)
Geo. Beandry—Can. 215 lbs. ext'd 1898
Paul Viallon—La. 302 lbs.
Jas. Heddon—Mich. 410 lbs. (all comb but 48 lbs.)
O. O. Poppleton—Iowa. 275 lbs comb.
E. E. Hasty—Ohio. 142 lbs. comb (in a poor location.)
J. M. Hambaugh—Ill. 264 lbs. ext. 1888
F. L. Snyder—Wis. 700 lbs. ext'd 1889
H. Lathrop—Wis. 225 lbs. comb, 1889
C. W. Dayton—Iowa. 462 lbs. ext. 1885
S. G. Wood—Ala. 172 lbs. comb, 1885
Baldensperger—Palestine. 178 lbs. extracted in 1891.
J. B. Craven—Ohio. 218 lbs. comb, 1885
J. I. Earl—308 lbs. extracted in 1895.
Vincent Quinn—150 lbs. in 1888.
Dr. Gallup—Iowa. 750 lbs. (of which 600 lbs. was gathered in 30 days.)
Mr. Hammond—Iowa. 188 lbs., mostly comb. (Same apiarist, 267 lbs. ext.)
J. W. Bittenbender—Ioa. 208 lbs. comb
Frank Coverdale—Iowa. 208 lbs., ½ comb, ½ extracted, in 1886.
L. W. Baldwin—Mo. 150 lbs. comb.

Like the reports for whole apiaries the above give very few details as to the conditions, size of colonies, etc. Mr. Doolittle gives a detailed report of the 566 pounds of extracted quoted above. The colony was good at the start, furnisht with all the combs needed, had plenty of honey during early spring, did not swarm, and the brood was carefully spread during the proper season. Most likely the majority, if not all of the above yields, were obtained under ordinary management.

One colony belonging to Mr. C. Butman (Maine) gave, in 1881, 310 pounds extracted; in 1882, 340; in 1883, 340; in 1884, 45; in 1885, 360. That 45 pounds for 1884 shows what a difference exists between the yield for a bad season and a good season.

Another interesting item is the amount brought in in a single day, or about, by a single colony during a good flow :

A. I. Root reports 20 pounds in two days (10 pounds per day) by an artificial swarm; 43 pounds in three days ($14^1/_3$ per day) during basswood flow; and in another case 18 pounds for a single day. Also a maximum of 10 pounds per day during white clover flow.

L. C. Root reported 4,103 pounds in seven days by 40 colonies, that is an average of over $14^1/_2$ pounds per day and per colony.

Mr. Doolittle reported 66 pounds in three days (22 pounds per day) from basswood.

R. Shipman, 72 pounds in four days (18 pounds per day) from Alsike.

Mr. Atchley, 521 pounds in 21 days (nearly 25 pounds per day) from Alsike.

Mr. Hambaugh reported $63^1/_2$ pounds in six days ($10^1/_3$ per day); and from another colony 86 pounds in nine days ($9^1/_2$ per day), both from Spanish-needle in 1889. That year from the same source 43 colonies gave him 2,021 in ten days (nearly $4^3/_4$ pounds per day). The same 43 colonies yielded the following year from the same source, 2,033 pounds, the best yield being 73 pounds in five days by a single colony (nearly 15 pounds per day).

We might also mention the colony of Dr. Gallup referred to above, which gave him 750 pounds during the season, of which 600 pounds were gathered in 30 days, making an average of 20 pounds per day. Evidently some days yielded more than 20 pounds, and some others less. The same remark applies to several of the above figures. For instance, when Mr. Atchley reports 521 pounds in 20 days it is not impossible that some days may have brought in even as much as 35 pounds. All these are maximums, we may say exceptional yields, as we can see by comparing them with the following.

This average honey-yield question was askt in Gleanings in Bee-Culture in 1887, and in the American Bee Journal in 1888, "What do you consider an average yield per colony?" Also in Gleanings in Bee-Culture in 1889, "What has been your average yield?" Again in 1898, in the American Bee Journal, "What do you consider an average crop for the last 25 years?" Here are the answers :

Dadant & Son—Illinois. 1887—25 lbs. comb, 50 lbs. extracted; 1888—50 to 85 lbs.; 1889—21,000 to 22,000 lbs. yearly from 350 to 400 colonies during 10 years; 1898—about 50 lbs. extracted.

A. B. Mason—Ohio. 1887—60 lbs. extracted.

Paul Viallon—Louisiana. 1887—75 to 100 lbs. comb; 100 to 125 lbs. extracted; 1888—50 lbs.; 1889—80 lbs. extracted.

W. Z. Hutchinson—Michigan. 1887—50 lbs. comb; 1889—about 100 colonies.

Jas. Heddon—Michigan. 1887—50 lbs. comb, 75 lbs. extracted, and 100 percent increase in number of colonies.

O. O. Poppleton—1887, 110 lbs. extracted, in Iowa; 1889—110 lbs., mostly extr'd, in Iowa. 1898—Not more than 100 lbs., in Florida.

R. Wilkin—Calif. 1887—85 lbs.; 1889—75 lbs., mostly extracted; about 300 colo's.

Mr. Doolittle—New York. 1887—75 lbs. comb, 150 lbs. extracted (but is on the decrease.) 1888—75 lbs. comb; 1889—80 lbs.; about 45 colonies, spring count; 1898—75 to 90 lbs.

A. J. Cook (in Michigan the first three answers; in California for the last.) 1887—50 lbs. comb, 75 lbs. extracted; 1888—50 lbs. comb, 100 lbs. extracted is perhaps high; 1889—75 lbs. until the last 3 years; about 25 colonies. 1898—about 75 lbs., in California.

C. C. Miller—Illinois. 1887—39½ lbs.; 1889—a little less than 40 lbs.; 200 colonies 1898—from 25 to 30 lbs.

E. France—Wisconsin. 1887—103 lbs. extracted for the years 1883-1886 inclusive; 1889—100 lbs.; several hundred colonies; 1898—about 50 lbs. extracted.

E. E. Hasty—Ohio. 1887—below 20 lbs., in a poor location.

Mrs. Harrison—Illinois. 1888—25 lbs.

H. D. Cutting—Michigan. 1888—80 lbs., comb.

J. P. H. Brown—Georgia. 1888—40 lbs.; 1898—30 lbs.

Eugene Secor—Iowa. 1888—50 lbs., comb, 100 lbs., extracted; 1898—50 lbs., if properly managed.

R. L. Taylor—Mich. 1888—35 to 40 lbs.; 1898—40 lbs. comb from good colonies.

J. E. Pond—Massachusetts. 1888—50 lbs. is perhaps high.

C. H. Dibbern—Illinois. 1888—40 lbs.; 1898—about 40 lbs., himself.

G. W. Demaree—Kentucky. 1888—50 lbs., not counting the last 3 years; 1898—40 to 50 lbs.

J. M. Hambaugh—Illinois for the first answer, California for the last. 1888—40 lbs., comb, 75 lbs., ext'd; 1898—100 lbs. if in the hands of good bee-keepers.

H. R. Boardman—Ohio. 1889—45 to 50 lbs., leaving out the worst seasons.

P. H. Elwood—New York. 1889—40 to 50 lbs.

A. F. Manum—Vt. 1889—from 500 to 1,000 colonies; about 18,000 lbs. yearly from about 350 colonies during the last 10 years.

J. A. Green—Illinois. 1889—45 lbs., comb, 90 lbs., extracted; 1898—25 lbs.

J. H. Martin—(while yet in the East) 1889—40 lbs., extracted, about 150 colonies

The following correspondents answered only in 1898:

E. S. Lovesy—Utah. 60 to 70 lbs.
W. G. Larrabee—Vt. 40 lbs.
Jas. A. Stone—Ill. 50 lbs.
R. C. Aikin—40 lbs.
Mrs J. M. Null—Mo. 60 to 100 lbs., extracted; 35 to 60 lbs., comb.
S. T. Pettit—Ont. 125 lbs. extracted, if properly handled; 75 lbs. comb, if properly handled.
Rev. M. Mahin—Ind. 25 lbs., taking all bee-keepers into consideration.
D. W. Heise—Ont. 69 lbs. for himself, but probably only 25 lbs. taking all bee-keepers into consideration.

The first thing that appears from these figures is how much lower is the yield now than it was 10 years ago. Why it is so would take too much space here to discuss, but the comparison between the 1898 column and the three others tells the tale at once.

Another point is clearly shown, that is, more honey can be obtained by working for extracted than for comb.

The most striking feature is the enormous discrepancy between the maximum yields and the average yields. For instance, Mr. Doolittle gives us a maximum of 566 pounds of extracted and 309 pounds of comb, and in one instance 66 pounds brought in in three days by a single colony, and then informs us that his average yield is only 80 pounds. Two causes contribute to the fact. One is the great difference between the colonies composing an apiary; this shows that our methods, or rather practices, of management could be improved; there is no reason why the bad colonies should not be as good as the best. The other is the difference between the seasons. As an illustration, the following from E. France & Son is striking:

1880— 6,000 lbs. from 124 colonies, about 48 lbs. per colony.
1881— 4,000 lbs. from 75 colonies, 54 lbs. per colony; increase to 157 colonies.
1882—13,000 lbs. (record lost); increast to 295 colonies.
1883—22,059 lbs. from 211 colonies; 105 lbs. per colony; (increase not reported.)
1884—31,489 lbs. from 291 colonies; 109 lbs. per colony.
1885—30,079 lbs. from 321 colonies; 91 lbs. per colony.
1886—10,000 lbs. from 50 colonies sold; 200 lbs. per colony.
1886—42,480 lbs. from 396 colonies; 108 lbs. per colony; increast to 507 colonies.
1887— 5,000 lbs. from 410 colonies; 12 lbs. per colony.
1888—11,824 lbs. from 431 colonies; 28 lbs. per colony; increast to 588 colonies.
1889—26,070 lbs. from 531 colonies; 49 lbs. per colony.
1890— 3,125 lbs. from 649 colonies, 4 lbs. per colony; increast to 661 colonies.
1891—30,000 lbs. from 580 colonies; about 52 lbs. per colony.
1892—no surplus. 620 colonies fed 14 barrels sugar.
1893—41,425 lbs. from 323 colonies; 129 lbs. per colony.
1894— 3,700 lbs. from 426 colonies; about 9 lbs. per colony.
1895—no surplus; fed 7 barrels sugar and killed 160 colonies to save feeding.

This from Mr. Stolley is perhaps still more to the point:

YEAR.	No. of colonies, spring count.	Average Yield per colony, all extracted.
1881	6	58 lbs.
1882	14	22⅔ lbs.
1883	25	14 lbs.
1884	48	7⅝ lbs.
1885	32	8 lbs.
1886	23	114½ lbs.
1887	23	90¾ lbs.
1888	21	70 1-3 lbs.
1889	27	75⅝ lbs.
1890	26	45 1-3 lbs.
1891	18	131 lbs.
1892	31	33⅓ lbs.
1893	32	27⅔ lbs.
1894	23	2 lbs.
1895	17	176⅓ lbs.
1896	26	116 lbs.
1897	28	56 lbs.

These reports need no commentary about showing the difference between seasons.

The following is R. C. Aikin's report (in Colorado) for 1890; swarming was prevented by removing the queens:

2 colonies gave 28 lbs. each.
2 colonies gave 56 lbs. each.
12 colonies gave 84 lbs. each.
37 colonies gave 112 lbs. each.
44 colonies gave 140 lbs. each.
19 colonies gave 168 lbs. each.
3 colonies gave 196 lbs. each.
5 colonies gave 224 lbs. each.
1 colony gave 252 lbs.

Only supers full (of 28 pounds each) were counted. The 135 colonies were increast to 285. The flow lasted only 50 days. Of the 2 colonies which gave only 28 pounds each, one swarmed and the other superseded its queen at the time she ought to have been laying the most.

The following is Mr. Jones' (an old correspondent of Gleanings in Bee-Culture) record of a hive on scales, and weighed daily during the basswood flow, three years in succession:

1889.

July 11	gain of 7 lbs.	
" 12 (wet day)	" 16	"
" 13	" 4	"
" 14	" 19	"
" 15	" 20½	"
" 16 (supers full)	" 10	"
" 17	" 9	"
" 18	" 19	"
" 19	" 26	"
" 20	" 19	"
" 21	" 22	"
" 22	" 15½	"
" 23	" 21	"
" 24	" 25	"
" 26	" 9	"
" 27		
Total	250 lbs.	

Average, 16⅔ lbs per day. The average yield per colony for the whole apiary was 52 lbs., mostly comb.

1890.

July 12	gain of 14 lbs.	
" 13	" 16	"
" 14 (supers full)	" 8	"
" 15	" 15	"
" 16	" 20	"
" 17	" 16	"

1890.

July 18	gain of 15 lbs.	
" 19	" 16	"
" 20	" 16	"
" 21	" 8	"
(Supers full and swarmed.)		
Total	144 lbs.	

Average, 14 2-5 lbs. per day. Average yield for the whole apiary, 80 lbs., mostly extracted.

1891.

July 12	gain of 12 lbs.	
" 13	" 19	"
" 14 (rained)		
" 15	" 12	"
" 16	" 24	"
" 17	" 15	"
" 18	" 21	"
" 19	" 16	"
" 20	" 17	"
" 21	" 13	"
Total	149 lbs.	

Average of 16 lbs. per day, leaving out the 14th. Average yield for the apiary, 83 lbs. per colony, extracted. About 130 colonies.

Mr. L. E. Mercer's colony on scales (in an 8-frame hive) gave for 1890 in California:

April 15	2 lbs. gain		May 15	12 lbs. gain	
" 16	4¾	"	" 16	16	"
" 17	1	"	" 17	18	"
" 18			" 18	10¾	"
" 19	½	"	" 19	7½	"
" 20			" 20	6¾	"
" 21	1	"	" 21 (fog ext'd 65 lbs.)		
" 22	4	"	" 22	8½	"
" 23	4	"	" 23	13½	"
" 24	4	"	" 24	10	"
" 25	7½	"	" 25	10	"
" 26	4½	"	" 26 (fog)	4	"
" 27	7	"	" 27 (fog)		
" 28	6	"	" 28 (fog)		
" 29 (cold weather—lost 1½ lbs.)			" 29	7½	"
" 30 " " " 1 lb.			" 30	8	"
May 1	5½ lbs. gain		" 31	3½	"
" 2	6½	"	June 1	7½	"
" 3	8	"	" 2	6¾	"
" 4—6 lbs. gain; ext'd 56½		"	" 3	7½	"
" 5	10	"	" 4	9	"
" 6 (fog—lost 1 lb.)			" 5	10	"
" 7 (fog—lost 1½ lbs.)			" 6	5	"
" 8	5½	"	" 7	2	"
" 9			" 8	4	"
" 10	3½	"	" 9	4	"
" 11	11	"	" 10—4½; ext'd 50 lbs.		
" 12	12	"	" 11	2	"
" 13	16½	"	" 12	¾	"
" 14 12 lbs. gain; ext'd 68 lbs.					

Total during that period, 351 pounds. From June 12 to July 20 there was a gain of ½ to 2 pounds per day.

All the above items are taken from Root's "A B C of Bee-Culture," Prof. Cook's "Bee-Keeper's Guide," the American Bee Journal from 1888 to date, Gleanings in Bee-Culture from 1886 to date, and the Bee-Keepers' Review.

Knox Co., Tenn.

Notes on Cuban Bee-Keeping.

BY HARRY HOWE.

BEE-KEEPING in Cuba is not so very much different from bee-keeping anywhere else. The most important difference is the time of year for the various operations. At present the routine work seems to be about like that for June in New York. It consists in building up nuclei, swapping brood for honey, and honey for brood, spreading brood, etc. Here, where the nights are always warm, one can spread brood without much danger of chilled brood.

There is not enough honey as yet in the fields to keep the bees breeding as much as I like, so I am practicing stimulative feeding by putting out honey at one side of the apiary, as I have done at home for several years. Some have thought that the neighbors' bees would get some of it,

but I do not think they do. The feeding is done at a time when the bees do not fly very much, nor very far from home. Besides, I find that my neighbor here is a pretty good sort of fellow, the same as he was in New York, and if his bees should benefit slightly by my feed, it is not a State's-prison offense. There seems to be a difference in locality, even in Cuba.

My three apiaries are in a row along one of the main government roads. One is three miles north of home, and the other out-apiary eight miles south. At present the north apiary—Lucado—is getting no honey. The home-apiary—Paula—some; and the south apiary—Dique—is storing some surplus.

When I came here Senor Ranelo had not visited the Dique apiary in three months. Upon my first visit I found one colony which some one had evidently tried to extract, and gave it up as a bad job. The cover was off, and the top story set crosswise upon the bottom story. Yet there was brood in both stories and plenty of honey. This during the rainy season, and in a large apiary where robber-bees are always looking for plunder, shows what bees will sometimes stand. They were black bees, at that.

There are almost no fences left here, and but a small share of the houses left standing. Thousands of acres that were farmed before the war are now used for cattle-ranges. In many cases it is not even known who owns the land. Often entire families perisht where they were driven from the farms into the villages, while the Spaniards spent the months they were given to get out of Cuba, in destroying the records of the land transfers. Even the stones used to record the surveys at the corners of the sections have the inscriptions effaced in many cases. Everything of value they could not take away with them seems to have been wantonly destroyed.

My employer here can read a little English by means of a grammar and a dictionary. He is a warm personal friend of Mr. Craycraft, and when the copy of the American Bee Journal containing Mr. Craycraft's article read at the Philadelphia convention came to hand, he wisht to read it. It was his first attempt at the amended spelling. When I came in he was tearing his hair and using all sorts of language towards a dictionary which, he said, did not have all the words in. My knowledge of Spanish was not equal to the task of explaining how it was that there should be two ways of spelling one word.

Senor Ranelo has a Spanish bee-paper which appears to be pretty good. Provincia Habana, Cuba, Oct. 10.

Planting Trees for Honey—Some Suggestions.

BY J. H. MARTIN.

WHEN living at the old home in eastern New York I was in daily contact with specimens of such noble trees as the basswood, sugar-maple and elm; and the drooping-willow grew to perfection on the old homestead farm. The public highway ran thru it for a distance of about 80 rods, and it was once my desire to make that 80 rods a beautiful avenue; and when opportunity offered I planted trees, both basswood and maple. Those trees have been growing for more than 20 years; and I have assurances from parties who live near them that there is now a fine avenue, with but few bees near to gather the honey. Certainly, a score or more of basswood trees along the roadside would amount to but little for the operations of a large apiary, but if farmers could become interested in tree-planting there would be a chance for more bee-keeping later on.

My ideas in relation to tree-planting had been definitely formulated and settled long before I left the East. There is scarcely a farm in the hill country of eastern New York and the New England States without more or less waste land upon it. The steep and stony hillside has been denuded of trees, what little fertility the land possest has been exhausted from repeated croppings, and now it is turned over to stones and weeds, and called the "back pasture." Upon this same barren hillside the tree will grow, and in its thrift will draw moisture to the surface, and perhaps the long-forgotten spring will come to life again.

I have seen many hillsides that were naturally moist, or which had a fringe of springs upon their lower edges, made as dry as a bone from the free use of the woodman's axe. When the spring fails, the little stream diminishes, the river a little farther down becomes sluggish, sandbars appear, and navigation ceases—all a result from the denuded hillsides.

It seems to me that the remedy for these evils is very simple. Nature has been thrown out of balance, and we must get her back. In order to get her back we must ask Nature a few questions. Nature says that the shade of the tree is necessary for the continuous flow of the spring; and how lovingly the willow performs her part; and where the trout-brook winds its way thru the meadow, the clover and the grasses grow with such vigor, and intertwine from bank to bank if possible, thus shielding the water from the rays of the sun, and preventing evaporation. Wherever the land is not too valuable, these springs and little streams can be protected by the planting of trees. The willow, locust, basswood and the maple would be agreeable to the bee-keeper, and perform the work of making shade. The locust tree alone would make a rapid growth, and in a few years the grove could be trimmed out at a profit for wood or fence-posts. The sugar-maple would make fair returns from its honey and sugar, while the basswood would bear thinning out within 20 years for its white lumber. Going a little further, is there not a benefit in the judicious planting of trees even where the land is valuable?

The ten acres planted by Mr. Root was upon poor ground, but, according to his confession, if he had been as enthusiastic in forestry as he is in gardening, the result would have been different in spite of the lack of drainage.

The basswood and the locust will make a good growth in ten years, and produce quite an amount of honey, and, as the years pass, the tree-top acreage will increase.

The planting of trees for the honey they will secrete is a matter of wide application; and here in California some of our bee-men are alive to its importance.

Here, where so much depends upon the conservation of the water supply, the government comes to our aid, and has set off large tracts of our mountain lands into government parks. Our large timber grows upon these mountains; and but for the timely interference of the government, the woodman's axe would leave them as barren as a desert. Associations, with men of wide experience in forestry, are in active operation; and when the planting of trees is in progress the bee-man is remembered in the planting of the eucalyptus. The basswood will grow in California, and a judicious planting of it in favored locations on the mountains would surely result in benefit.

We hope the time will come when we shall learn to cultivate Nature, as seen in the animal, the tree, the fountain, the flower and the insect, and there will be harmony among them all. We have much to learn, and many questions to ask of Dame Nature, but she will not fail us if we ask unselfishly and listen patiently.—Bee-Keepers' Review.

Los Angeles Co., Calif.

The New (1899) Edition of A B C of Bee-Culture, just revised, is indeed a fine work, very interesting descriptions of which have been given on pages 603, 619, and 635. It is a book every bee-keeper should read thoroly. The regular post-paid price is $1.20, but to all our subscribers who pay any arrears that may be due, and also $1.00 for the Bee Journal for 1900 (next year), we will mail a copy of A B C of Bee-Culture for only 75 cents, provided the order is received *before* January 1, next. We make this same offer to all who have paid their subscriptions to the end of 1899—send us $1.75 and we will mail you the book and credit your subscription for 1900. We make the same offers on "Langstroth on the Honey-Bee," revised by Dadant (1899 edition).

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

ONE DOLLAR A YEAR. SAMPLE COPY FREE.

[Entered at the Post-Office at Chicago as Second-Class Mail Matter.]

United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

Membership Fee—$1.00 per Annum.

EXECUTIVE COMMITTEE—Pres., E. Whitcomb; Vice-Pres., C. A. Hatch; Secretary, Dr. A. B. Mason, Station B, Toledo, Ohio.

BOARD OF DIRECTORS—E. R. Root; E. Whitcomb; E. T. Abbott; C. P. Dadant; W. Z. Hutchinson; Dr. C. C. Miller.

GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. NOVEMBER 2, 1899. NO. 44.

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Keeping Honey-Customers Supplied.—While it is true that honey is now much higher in price than for several years, there are plenty of people who are willing to pay the advanced price for the genuine article.

Where the crop has been short, or no crop at all, it certainly will pay the honey-producer to supply his local trade, even if he must send away for the honey, and then handle it on a very small margin of profit. In the future it will be found to have paid well to take care of customers just the same in a year of short honey crop as in a year of plenty.

While there is not very much honey offered, still there is some, and there will likely be enough so that all who want it can have at least a little. Better see to it that your own trade has a chance to have some if they want it.

Necessity of Pure-Food Legislation. Mr. H. D. Murry, of Mississippi, sends us the following in reference to the address of Rev. E. T. Abbott, which we publisht on page 660:

MR. EDITOR:—Enclosed find 10 cents for which please send me an extra copy of the American Bee Journal of Oct. 19, 1899. I want to send it to our congressman and call his attention to Rev. E. T. Abbott's paper on the "Need of Pure-Food Legislation." Our congressman is a personal friend of mine, and I hope to secure his support of the Brosius Bill.

I would like to ask every bee-keeper in the United States to make a similar effort. The trouble is, we are too prone to wait for some one else to act. We are too modest. We can rest assured the adulterators are not going to be over-modest in their efforts to defeat the Bill.

If every bee-keeper who is acquainted with his congressman will make an effort, our influence will be felt. It is a righteous cause, and they will not dare oppose it if they are given to understand the eyes of the people are upon them.

Please stir them up in the American Bee Journal along this line, and let us have "a long pull, a strong pull, and a pull all together," and we will land that Bill, dead sure. Let us know no such word as "fail."

Yours truly. H. D. MURRY.

Mr. Murry is on the right track. Others will do well to follow his good example. We have perhaps 200 extra copies of the number of the American Bee Journal with Mr. Abbott's excellent address, and will furnish them free as long as they last, if those who can use them to good advantage will drop us a postal card asking for them for this purpose. We think a good way to do would be to cut it out and enclose it with a personal letter to your congressman. He would be more certain of getting it in that way, and more likely to read it. Perhaps some, however, can hand it to their congressman and put in a strong word with it.

There is no doubt that bee-keepers can help much in securing the passage of the Brosius Bill. Let all do all they can. Perhaps it wouldn't be a bad idea if the officers and board of directors of the United States Bee-Keepers' Association would get up a short address on the subject, and mail it, with their signatures, to every senator and representative in Washington, as soon as congress assembles, or just before the Bill comes up for debate and passage.

Honey for Breakfast is becoming the style down at the nation's capital—Washington. So said Mr. Danzenbaker at the Philadelphia convention. He was urged to encourage the spread of that "style" as much as possible.

Honey is on our table at every meal, but this particular boarder does justice to it only at the noon and evening meals, unless there are pancakes on hand for breakfast, when it "goes" all right then, too; and we don't seem to tire of it. But who could tire of fine alfalfa honey? One might as well think of tiring of bread, butter, and potatoes, as to tire of alfalfa extracted honey.

We think bee-keepers' families ought to eat more honey and buy less sugar. The family of Hon. Eugene Secor, we understand, believes thoroly in home consumption of honey, for it takes something like 800 pounds a year to supply them, we believe. There are eight in his family, thus making about 100 pounds for each annually, or a little over a quarter of a pound a day. We presume they have adopted the Washington style, and perhaps have added thereto the other two meals.

The Buckwheat States, in their order of acreage devoted to its growing are, New York, Pennsylvania, Maine, Michigan and Wisconsin. Of course, naturally, the bulk of the honey-yield therefrom would be in the East. Very little buckwheat honey comes to this market. Chicago is probably the largest consumer of alfalfa and sage honey, the latter being preferred by the manufacturers, especially bakers, who want a strong-flavored honey.

Passing of the Commission Man.—We were recently talking with a representative of a commission firm dealing in butter and eggs on South Water street, and he assured us that the commission man had had his day. "Why," he said, "there is very little produce consigned these days—nearly everything is sold for cash before it leaves the producer's hands. And this change has all come about by reason of the swindlers in the commission business. Farmers are getting so they just won't trust any one with their products without knowing in advance what they are going to realize for them."

He referred also to the stealing of C. R. Horrie & Co.

here a few years ago, and how the American Bee Journal helpt to drive out such concerns that were fleecing bee-keepers. Another was Geo. T. Wheadon & Co., said to have been backt by Terrill Bros., all of whom are out of the business now, having made their "pile," we presume, and also on account of its getting "too warm" for them where they were doing business.

We are glad that all business is coming more and more to a cash basis—pay cash and get cash. Some one has well said, "Pay as you go, or else don't go." It's a pretty good rule to follow, if at all possible.

Prettiest Bee-Yard Yet Shown is what Mr. "Stenog" says in Gleanings in Bee-Culture in referring to the one shown on page 625 of this journal. Here is his whole comment and "commend:"

Mr. York is introducing pictures more and more into his excellent journal, and I commend him for it. On the first page of his issue for Oct. 5 is given a view of what I deem to be the prettiest bee-yard yet shown. It belongs to F. G. Herman, of New Jersey. It is a veritable little park, and Rambler's "muse" prompts one to say:

I'd like to be a honey-bee,
And fly around that park;
I'd visit all the flowers bright,
And fill my combs by dark.

Thank you, Mr. "Stenog," for your words of commendation, and poetical musing. We are glad to know that you are able to find occasional "Pickings" in our "Field." Pictures in bee-papers are getting to be quite a feature. The great advance in the past few years in all classes of magazines in this respect has been very markt. Often a single glance at a picture will give one a more clear idea than a long wordy description. Considering the character of Gleanings in Bee-Culture pictorially, and his connection therewith, "Stenog's" opinion may be counted of some value.

Packages for Retailing Extracted Honey.—R. C. Aikin, in the Progressive Bee-Keeper, thinks that lard-pails are fine for the general trade in extracted honey. The pails are piled up and left till the honey is solid as lard, then it is ready to sell. Editor Doolittle also wants the honey candied, but is enthusiastic over boxes as packages for extracted honey. Five-pound boxes are made of $\frac{3}{8}$ stuff, 10-pound boxes of $\frac{1}{4}$ stuff (likely those two dimensions should change places), 25-pound of $\frac{1}{2}$ inch, 50-pound of $\frac{3}{4}$ inch, and the 100-pound box of inch stuff. The box is coated inside with paraffine, filled with its proper weight of honey and a little extra for waste and good measure, a piece of paraffine paper is put over and the cover laid on, and when it is candied it is nailed up and is ready for shipment. If a box is broken there is little loss. Advantages are, cheapness, solid packing, and a lower freight rate.

To Whiten the Neck.—Mr. J. N. Ladenburger, of Hamilton Co., Ohio, sends us the following clipping for the "fair sex:"

When the neck and throat have become brown or yellow looking they may be whitened by the persistent application every night of the following paste, spread on a soft rag and wrapt around the neck: Honey, one ounce; lemon-juice, one teaspoonful; oil of bitter almonds, six drops; the whites of two eggs. Add enough fine oatmeal to make a smooth paste.

The Genesee County Bee-Keepers' Society was organized at Batavia, N. Y., Aug. 31. The officers elected are: F. H. Fargo, president; vice-presidents, R. R. Pierson, G. W. Young and F. L. Watton; Secretary, O. J. Gardner, of West Bethany; and treasurer, H. H. Fisher. We wish the new organization all the success possible.

A German Foul-Brood Circular has been issued by Mr. N. E. France, the efficient foul-brood inspector of Wisconsin. We presume there are so many German bee-keepers in that State who are unable to read English that it is really necessary to "sprechen Deutsch" to them in order the more effectually to destroy the foul disease among bees.

The Weekly Budget

Mr. Thos. Wm. Cowan, editor of the British Bee Journal, as most of our readers know, is living now in California (Monterey County). In a letter received from him dated Oct. 18, he says:

"We have been enjoying this place very much, and I have certainly never been anywhere where the climate is so agreeable. The thermometer has ranged all the summer

Mr. Thos. Wm. Cowan's California Home.

between 55 and 70 degrees, and only last week did we get it up to 78 degrees. Mrs. Cowan has been wonderfully well, and it has done me an immense amount of good.

"I am sending you a photograph of our place here, so that you may have some idea of the vegetation. You see we are surrounded with palms and other tropical or semi-tropical plants."

We are very glad indeed to know that our good English friends are enjoying their sojourn in our Western climate, and among our people. We hope they will conclude to remain permanently. "Uncle Samuel" will be delighted to adopt them, and as many more like them as will come over our "Eastern Pond."

But no wonder Mr. and Mrs. Cowan are well and happy in such a lovely place as is shown in the picture sent us, and which we take pleasure in showing to our readers. All it lacks is a few colonies of bees on that beautiful lawn a few rods west of the mansion.

* * * * *

The Humane Alliance.—A four months' subscription to The Humane Alliance, the handsome illustrated magazine of animals and pets; a neat book containing a charming story of an animals fidelity and showing man's inhumanity to man; also an interesting book on the subject of Humane Education, will be sent free, for 10 cents to cover the cost of forwarding. The Humane Alliance, 127 East 23rd St., New York, N. Y.

* * * * *

Mr. John H. Martin, of Los Angeles Co., Calif., writing us Oct. 21, said:

"We have had a nice rain, and the fields and the mountain sides begin to respond to the moisture by putting on a green hue. Judging from the rainfall in the past, we are sure of a bountiful amount of water the coming winter."

Do you want a Good Market for your Crop of Honey,

BOTH COMB AND EXTRACTED?

We are in position to handle any quantity, large or small, to better advantage than any other house, for the following reasons:

We deal almost exclusively in honey, giving it our closest attention all the year round.

We keep ourselves thoroly posted as to the result of the crops gathered in the honey-producing States.

We are acquainted with the most desirable trade thruout the country, and know exactly what their wants are.

We know, thru our long experience, the different varieties and qualities of honey; therefore know what we are selling, and no fear of selling fancy stock at the price of a third grade.

We handle by far the bulk of all the honey sent to New York, and our volume of business enables us to make the charges very reasonable.

Why, then, should we not be able to handle your crop to advantage, and do you justice in every respect?

We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

HILDRETH & SEGELKEN,

120 and 122 West Broadway, NEW YORK CITY.

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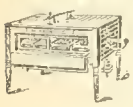

and pay for it before giving it a trial. We will send the celebrated **NEW PREMIER INCUBATOR** on trial. This evidences our faith in it. So simple a child can run it. First prize World's Fair. Also sole manufacturers of **Simplicity Incubator.** Catalogue and Poultry Helps 5 cts. Plans for Poultry Houses etc., 25 cts.

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Here we Go for a Bargain

For a limited time (as long as our present stock lasts we will sell **Muth's 2-lb. Square Glass Honey-Jars,** including corks, at the same price as our 1-lb. Jars, $5.70 per gross. This is a reduction of $1.80. They will go like hot-cakes at these prices, so send in your orders immediately if you want them, and at the same time don't forget we are **headquarters** for the **South in the Bee-Supply business,** including **Root's Goods, Langstroth Hives, etc.** Catalog free.

C. H. W. WEBER,

Successor to C. F. Muth & Son,
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The Mississippi Valley Democrat

—AND—

Journal of Agriculture,

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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

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BEEDOM BOILED DOWN

Shade vs. Sunshine.—A. Norton, in Gleanings in Bee-Culture, while not disputing what may be in other places, says:

"It has been my experience, the result of extended observation in various parts among the coast valleys of California, that bees in the shade are invariably as cross as can be endured, when the same bees in the warm sunshine will be tractable. Moreover, the honey will be sealed over in a thinner or less ripened state in the shade. The reason of both conditions is not hard to seek. Shade, then, is eminently a 'question of locality.'"

Shade for Hives is considered a source of profit by the Wilson Bros., of the Kickapoo Valley, Wisconsin. For two years they have been making observations on this point, and they think that shade increases the surplus about one-fifth. Their idea is that the intense beat upon the walls of a single-walled hive drives the bees from the hive to a certain extent upon hot days. Herbert Clute told me that he secured more honey from colonies in chaff hives than from those in single-walled hives. I related these views to C. A. Hatch, of Richland County, Wis., and he took opposite views. The Wilsons prefer trees for shade. Box-elders grow quickly and make a nice tree. —Bee-Keepers' Review.

Hungarian Bees.—The Banater or Hungarian bee, says Baron Bela Ambrozic, occupies an intermediate position between the Italian and Carniolan in swarming proclivities, and also in brood-rearing, and storage of honey in the brood-chamber. The colonies do not become weak in a pro-

HATCH AND BROOD your chicks with machines that leave no doubt of success. A simple, durable and perfect machine is the

ILLINOIS.

Made in several convenient sizes, from 50 egg up. **Impervious to sudden changes in temperature,** Packed with asbestos and covered with iron. Can't shrink or warp, or burn from lamp explosion or super-heating. Don't buy an incubator or brooder until you get our **Free Catalogue.**

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

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Sole Manufacturer,
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Dairy Farm For Sale

consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 26 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

The farm is not only a splendid one for dairying, but is also a good location for bees. There is white clover, sweet clover, basswood, etc. The editor of the American Bee Journal has been on the farm and will confirm every statement concerning its value.

Address, for further particulars, terms, etc.,

Mrs. J. B. Ayers, Libertyville, Lake Co. Ill.

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Root's Column

—THE—

A B C

—OF—

Bee-Culture.

Revised in 1889 by E. R. Root.

Only one month since it came from the press, but nearly **EIGHTEEN HUNDRED COPIES** sold. No other American work on this subject is kept up to date like the A B C of Bee-Culture.

See what the senior editor of the British Bee Journal, publisht in London, says:

"I must thank you for your kindness in sending me a copy of your new edition of the A B C of Bee-Culture, which I have cursorily pursued with great pleasure. I see there is a great deal of new matter introduced to the advantage of the book.

"Your plan of revising every edition and eliminating obsolete practices and appliances is a very good one, and it is the only way to keep up with the times because a few years make such a change in bee-keeping, and those books written 8 or 10 years ago are, quite obsolete. There are only three books that I know of that are issued on the same principle, and these are your A B C of Bee-Culture, Bertrand's Conduite du Rucher, and my guide-book."

Yours very truly,

THOS. WM. COWAN.

For sale by all dealers in Bee-Keepers' Supplies. Price, $1.20, postpaid. If sent with other goods by freight or express, not prepaid, $1.00. Clubbed with Gleanings in Bee-Culture one year for $1.75, all postpaid.

THE A. I. ROOT CO.

MEDINA, OHIO.

longed flow as Italians do, while at the same time they store enough for the future. Its only faults are its inclination to rob, and to fly for nectar in bad weather, when numbers often perish. Since 1873 he has shipt nearly 6,000 colonies and 8,500 queens to nearly all the countries of Europe and America, and from Russia to Illinois, Ohio and Kentucky, and it has met with great favor. It is gray, with yellowish abdominal rings and yellowish down, and somewhat slenderer than the Carniolan, and it has a direct flight, while that of the Carniolan is waving. The best colored examples are in southern Hungary; those from the mountainous regions are much darker.—Bee-Keepers' Review.

Reversing Extracting-Combs Quickly.—Messrs. Coggshall and Howe have a rapid method of reversing the combs when extracting. There are two combs in each basket, with a sheet of tin between them. The honey from the inner comb is thrown against the tin and runs down just the same as tho it had been thrown against the inside of the extracting-can. To reverse the combs, a comb in the basket farthest away is grasped with the left hand, and one in the nearest basket by the right hand, then they are lifted up and quickly exchanged without any turning about. The comb from the far basket is put down in the near basket, and *vice versa*. This obviates any turning around of the combs, and two are moved at the same time. Mr. Coggshall prefers to have shallow combs go into the basket the same way as they hang in the hive, as they can be reverst with less motion.—Bee-Keepers' Review.

The Price of Plain Sections.—One of the arguments in favor of plain sections was that, taking less lumber and labor than the old style, they would cost less. So far they have been sold at the same price. There may be justification for this on the ground that a manufacturer who has been at some pains to introduce them should have some reward therefor. But one can hardly see why those who have made no effort for their introduction, and especially those who have opposed them, should be thus rewarded. Yet all alike sell the plain sections at the same price as the old-style, the manufacturers being the only ones benefited by the change. According to Gleanings in Bee-Culture, however, a change is likely to come. The editor says:

"Since basswood timber, like all other timber, is advancing so sharply—nearly a third—it begins to look as if there ought to be a difference in price between plain sections and the old-style with bee-ways; for the latter, taking more timber, and more labor to make, of necessity cost more.... There will probably not be much difference in the price the coming season, altho it is plain that, when plain sections come more into popular favor, they will have to be sold for less money. Our own books show that they are working that way."

Bee-Keeping in Greece.—Gleanings in Bee-Culture says that a correspondent of the Revue Eclectique, in writing from Greece, gives the following:

"From the most remote antiquity, and even before all civilization, Greece was a country essentially honey-yielding; and even down to our times the honey harvest in Hellenic countries has had a celebrity that no other rival product has been able to share; for the abundance and especially the richness of the flora of certain localities favor in an especial manner this agricultural industry.

"Nevertheless, in spite of the exceptional situation of Greece, it is to be noted that the honey-production of that State does not exceed $200,000 in value, and this does not suffice for home consumption. On the other hand, the celebrated honey of Hymettus, once gathered upon the mountain of that name, is produced no more. Grecian honey, the superiority of which is due essentially to its aroma, and to its fine fla-

SUFFERERS

FROM LUNG OR KIDNEY

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☞Write at once, stating age, sex, occupation, how troubled, post-office address, and enclose return stamp for immediate reply.

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Thousands in successful operation. Lowest priced 1st-class hatcher made. Circulars free. Send 6c. for Illus. Catalog

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The Rural Californian

Tells all about Bees in California. The yields and Price of Honey; the Pasturage and Nectar-Producing Plants; the Bee-Ranches and how they are conducted. In fact the entire field is fully covered by an expert bee-man. Besides this the paper also tells you all about California Agriculture and Horticulture. $1.00 per year; 6 months, 50 cents. Sample copies, 10 cents.

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that Page Fence is the standard of woven Fences? We try to make it such. Others try to imitate it.

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A Journal that is over a quarter of a century old and is still growing must possess intrinsic merit of its own, and its field must be a valuable one. Such is the

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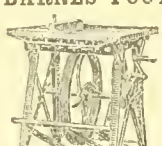

Read what J. I. PARENT, of Charlton, N. Y., says: "We cut with one of your Combined Machines, last winter, 50 chaff hives with 7-in. cap, 100 honey racks, 500 brood-frames, 2,000 honey boxes, and a great deal of other work. This winter we have double the amount of bee-hives, etc., to make, and we expect to do it with this Saw. It will do all you say it will." Catalog and price-list free.

Address, W. F. & JOHN BARNES, 5Ctf 995 Ruby St., Rockford, Ill.

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3 Cents Each for Names.

Send 10 cents and the names of 5 neighbors, who raise poultry, and we will send you our monthly 20-page paper for one year. Regular price, 25 cents a year. Sample copy free. Mention American Bee Journal when writing.

Inland Poultry Journal,

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"CORED TO DEATH"

Hooker, Ward at the Wild's Inn.

is the startling headline of many a newspaper article. Horrible animals are safely **DEHORNING** done with the KEYSTONE KNIFE causes less pain than any device made. Cuts on 4 sides at once—clean and quick, no crushing or tearing. Fully warranted. Circulars &c. FREE.

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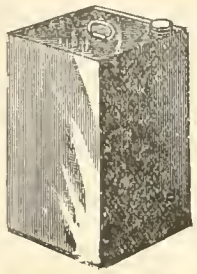

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In 60-pound Tin Cans.

WE have been able to secure a quantity of **WHITE ALFALFA EXTRACTED HONEY** which we offer for the present at these prices, on board cars here in Chicago: Sample by mail, 10 cents; 2 60-pound cans, in a box, 9½ cents a pound; 4 or more cans, 9 cents a pound. **Cash with order** in all cases.

Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

For 15 cents

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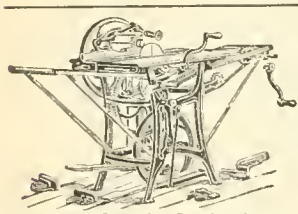
"MICHIGAN FARMER"

Will be sent to any address on trial for only 15 cents (or 5 for 40 cts. sent to different addresses)—less than a cent a copy for a large weekly national Farm, Stock and Home Magazine. Has many special features—any one alone is worth the price. Paper will start day order is received and continue weekly to Jan. 1. Currency or stamps. Address,

MICHIGAN FARMER, Detroit, Mich.

[The publishers of the M. F. are perfectly responsible; their offer is a bargain.—ED.]

Please mention Bee Journal when writing.



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Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.

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GUS DITTMER, Augusta, Wis.

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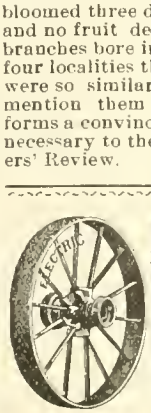
vor and nutritive properties, sells in Athens at from 37 to 45 cents a pound.

"There is also another kind of honey called *rodomeli*, or honey of roses. The colonies that produce this honey are situated in the province of Carystie, in the Eubœa—regions which are covered with wild roses, from which the bees gather honey.

"The honey produced by the juices of these plants exhales a perfume of roses that is very markt. It is sent principally to Constantinople, where it is sold at a very high price to Turkish families, who use it for cooking, and for seasoning their pastry. Wax is worth from 37 to 45 cents a pound."

Insects Fertilizing Blossoms.—In seven localities in Austria, last year, experiments on the fertilizing of fruit-blossoms were conducted according to a concerted plan on a variety of trees and shrubs, choosing those that had not borne much the preceding year. In one locality apple-blossoms covered from insects bloomed one to three days longer than uncovered ones; pear-blossoms four to five days longer; and plum-blossoms four to six days. No fruit set on the covered apple-boughs, and less on the covered pear and plum boughs than on the uncovered ones, much of which fell off prematurely. In another locality the experiment was tried on an almond tree, a pear and a cherry, which bore fruit in abundance on the uncovered branches. All the covered blossoms remained in bloom longer, but none developt except one of the almond blossoms, apparently because it rubbed against the covering, and this withered without a kernel. In the third locality, two covered apple boughs bloomed three days longer than the others, and no fruit developt, while the uncovered branches bore in abundance. In the other four localities the experiments and results were so similar it is not worth while to mention them particularly. The whole forms a convincing proof that insect aid is necessary to the fruit industry.—Bee-Keepers' Review.



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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	$1.00	$2.25	$4.00
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

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A Conqueror.

Noble is he whose moral strength
Beats down the walls of wrong,
Whose honest manhood uplifts man,
Whose life is like a song;
The brave and steadfast conqueror
Of appetite and sin,
He flings hope's stately portals wide,
And bids the lost come in.

ROSE HARTWICK THORPE,
in Demorest's Magazine.

Plenty of Stores for Winter.

Bees have been booming on asters for the past two weeks They will have plenty of stores to winter on, and I think some to spare. The early honey crop was very short, but of fine quality. J. S. WORLEY.
Maury Co., Tenn., Oct. 17.

Preparing for Winter—Report.

I am packing my bees for winter. I take the slats out of one super, leaving the lower super with the section slats in; put in the canvas mat or thin boards over the section slats, then fill the two supers with dry leaves. I have always wintered my bees on the summer stands, and my loss has never exceeded 5 percent. My crop this year has been fair, about 3,200 pounds from 62 colonies, spring count. I doubled back all my after July swarms, which leaves all colonies strong, and hives full of winter stores. J. Q. SMITH.
Logan Co., Ill., Oct. 23.

Short Honey Crop.

The honey crop is short in this locality; in fact, if it had not been for sweet clover the bees could not have lived thru the summer, but by its help we got a small surplus, say 10 pounds per colony. O. H. LASH.
Allen Co., Kans., Oct. 16.

Last Winter a Severe One.

I find that all small bee-keepers were wiped out of existence during the long and extremely cold weather we had last winter. In fact, I saw only one man at our fair who said he saved any of his bees. I exhibited three colonies of bees in observatory hives, and I believe I am safe in saying that hundreds of people askt me if I had any bees to sell. It seemed that nearly every one who had lost his bees was not discouraged, but wanted to begin again. It seemed to be the universal answer to a question of mine that I would put to a stranger who would come along and look at my bees, "Have you bees at home?" "No; I did have until they died last winter."

"Are those bees for sale, or will you sell me a colony or two to commence with again?"

There are no large bee-keepers in this vicinity; in fact, I am the largest, I think, in our county, having a little over 100 colonies. CHAUNCEY REYNOLDS.
Sandusky Co., Ohio, Oct. 16.

Bee-Keeping in Minnesota.

The fatality among the bees in this part of the country last winter almost discouraged most of those engaged in the business. Some lost all of their bees, while some were more fortunate, yet fully 50 percent died last winter and during the spring.

I put 39 colonies into winter quarters, and had 34 to start with in the spring. I have just doubled my number of colonies, and have taken over 3,000 pounds of comb honey, and my bees are seemingly in good condition for winter.

Now, I would like some one to explain the reason why so many lost their bees—

HOW MANY EGGS

do you get? No matter, you will get twice as many if you feed the hens **Green Cut Bone.** It **doubles the egg product in every instance. It makes hens lay in cold weather** when eggs are worth the most money. It makes early and long layers of the pullets.

MANN'S NEW BONE CUTTERS

"bent all." They make the hen business **sure and profitable. Mann's Clover Cutter**—made entirely of iron and steel. **Mann's Swinging Feed Tray** beats the hen that wants to scratch or roost in the trough—prevents waste. **Mann's Granite Crystal Grit is all Grit**—no dirt Cash or installments. Illustrated catalogue free. **F. W. MANN CO. Box 77 MILFORD, MASS.**

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IN BARRELS.

WE have some very fine WISCONSIN BASSWOOD EXTRACTED HONEY in barrels, each holding 360 pounds of honey, which we offer at **9 cents a pound,** f.o.b. Chicago, cash with order. Sample by mail, 10 cents. We can ship promptly. Address,

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is the very latest, up-to-date authority on the poultry business in this country. It treats the entire subject in a masterful way drawn from years of ripe experience in conducting the largest pure blood poultry plant in the country. Treats incidentally of the newest and best things about the world famous **Reliable Incubators and Brooders.** Sent to anybody for 10c to cover postage. **Reliable Inc. & Brooder Co., Box B-2 Quincy, Ill.**

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)

(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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can be secured from grain fed to live stock if it is cooked. It is more easily digested and assimilated by the animal stomach.

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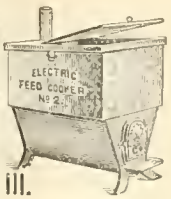

These cook feed in the quickest and best way and with the least amount of fuel. Made of cast iron, lined with steel. Boilers made of heavy galvanized steel, made in 12 sizes. Capacity from 25 to 100 gals. Strong, well made and will last indefinitely. Order before the cold weather catches you. Write at once for free circulars and prices. **Electric Wheel Co., Box 16, Quincy, Ill.**

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BY RETURN MAIL GOLDEN BEAUTY ITALIAN QUEENS —reared from IMPORTED MOTHERS. Untested, 50 cents; Tested, $1.00.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

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OUR MOTTO: WELL MANUFACTURED STOCK—QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

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G. B. LEWIS COMPANY,

WATERTOWN, WIS.,

CAN FURNISH YOU WITH THE VERY FINEST

Bee=Keepers' Supplies

IN THE WORLD.

Parties wanting goods before new catalog is issued will please write for quotations. We want every BEE=KEEPER on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

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Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee=Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

Please mention Bee Journal when writing.

23 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **23** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO.,

118 Michigan Street, CHICAGO, ILL.

men that were considered good bee-men, and had made a success of bee-keeping for years, and last winter lost all of their bees, while men that were not considered any better had fairly good luck. One thing I noticed was, that most of those that lost most of their bees, what they had left were very weak, and stored but little honey, and the swarms that they cast were mostly small, which went to show that what were left were very weak.

As to the price of honey, I would say that I am selling for 12½ cents per section, seven to the foot, regardless of color. I have no dark buckwheat honey, and I find more people prefer the amber honey than the white, therefore I sell all for the same price, and I see no reason why amber honey is not worth as much as white. I see no reason to say that white is better than amber, or that amber is better than white, as it is a matter of taste. Some prefer a sweet apple, while others prefer a sour one. I see that white honey is quoted higher than dark, yet I find just as many prefer the dark.

The Southern Minnesota Bee-Keepers' Association will meet in Winona the first Tuesday after the third Saturday in January, 1900. All interested are invited to attend. There will be notice of the program in due time.

E. B. HUFFMAN, *Pres.*

Winona Co., Minn., Oct. 23.

Results of the Past Season.

In the fall of 1898 I had 28 colonies of bees, all in fair condition, but not equally well supplied with honey. On Dec. 26 I put them into the cellar, but they became restless in about a month, so I took them out and placed them on the summer stands Feb. 20, 1899, the first day warm enough for bees to fly. However, it turned cold again, and remained so for a long time, so that when spring fairly opened, they had dwindled down to 15 colonies, but they did well until fruit-trees were done blooming. All the clover was winter killed, and not much basswood around here, so they were idle all summer, and I did not get an ounce of white honey; but about the middle of August they waked up, and made up for the lost time, the honey-flow lasting until about the middle of September.

I got 1,236 pounds of extracted, and about 30 pounds of comb honey, and increast them to 25 colonies, mostly by dividing, and they are now all in fine condition, and well supplied with honey. FRED BECHLY.

Poweshiek Co., Iowa, Oct. 22.

Convention Notices.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Nov. 8 and 9, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

Colorado.—That "irrepressible" Colorado State Bee Keepers' Association will hold their annual convention Nov. 27, 28 and 29, in the State House, Denver, beginning at 10 a.m. As usual, the State Agricultural College will assist us. Every one should come loaded with ideas and subjects for discussion; those who cannot come should write soon to the secretary or the president and tell us what are the particular needs of your locality. The members will be the program—we know from experience that you will make a very lively convention. Come everybody—there is sure to be "a hot time in the old town." R. C. AIKIN, Pres.,
F. RAUCHFUSS, Sec., Loveland, Colo.
box 378, Denver, Colo.

BEE-SUPPLIES

Root's Goods at Root's Prices. POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. WALTER S. POUDER, 512 Mass. Ave., INDIANAPOLIS, IND.

A Great Seed Farm.—One of the most interesting sights the writer saw last summer was the great Buckbee Seed Farm at Rockford, Ill. A visit to these farms and an insight into the methods employed to produce perfect seeds, give one a ready understanding of why the Buckbee business has grown to such great proportions. In the first place the greatest care is exercised in growing the seeds, everything possible being done to insure seeds possessing vigor and vitality. The seeds are grown under Mr. Buckbee's supervision on farms located at the extremes of the country from Michigan to California, at whatever point experience has shown that the best seed of that particular kind can be produced. At the trial farms at Rockford these seeds are carefully tested—first by a germination test which must develop at least 92 percent of the seed or they are discarded as not up to the Buckbee standard. After this they are given a practical field test. The writer saw 1,500 plats of ground upon which experiments were being made. No new variety is ever advertised or sold by the Buckbees until after it has been tested three years. It is in this way, by being absolutely certain that everything which leaves the seedhouse is exactly as represented, that the immense trade of the Buckbee firm has been built up. It is a striking object lesson in business honor. As bee-keepers are users of seeds of various kinds, this paragraph will be of interest. Always mention the American Bee Journal when writing to advertisers.

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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both papers one year to the same or different addresses for **$1.00.**

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Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

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George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condensed treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others.—Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 18.—The market is active and full quotations are obtained. A little fancy white sold at 10c, but sales are chiefly at 15c for the best grade; white, not strictly fancy, brings 13, 14 and 15c; amber grades range from 10@12c, and dark, 9@10c. Extracted, 7@8c for white, according to body, flavor and package; amber, 7@7½c; dark grades, 6@7c. Beeswax, 26@27c.
R. A. BURNETT & Co.

KANSAS CITY, Oct. 19.—The demand for comb honey is fair, and supply light. The supply of extracted is light, and demand good. We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13½c; No. 2, 12½@13c. Extracted, white, 7@7½c; amber, 6@6½; dark, 5@5½c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CINCINNATI, Oct. 9.—The demand for honey, both comb and extracted, is very good, with prices much better than a few weeks ago.

Fancy comb finds ready sale at 15@16c; darker grades are hard to sell at any price.

Good demand for all grades of extracted. White clover and basswood brings 8@8½c; amber and Southern at from 6@7c. Good demand for beeswax at 26c. C. H. W. WEBER,
Successor to Chas. F. Muth & Son and A. Muth.

We do not handle honey on commission—we buy for spot cash only.

BUFFALO, Oct. 20.—Supplies of strictly fancy 1-pound combs are lightest for many seasons; such are held firmly at 14c; few sales, 15c; No. 2, from 12c down. We do not notice any extracted in market. It is wanted at from 5c to 7c per pound. Beeswax, from 28@30c per pound for fancy pure yellow. BATTERSON & Co.

ALBANY, Sept. 26.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

BOSTON, Oct. 13.—We quote: Fancy No. 1 white in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c. Extracted, light amber, 7@8c; amber, 6½@7½c.

But little new to note in this market on honey. The supply still continues to be very short while the demand is naturally a little lighter, as the retail trade is not quite up to higher prices, still with the light stock they must evidently come to it. BLAKE, SCOTT & LEE.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12@13c; No. 1 amber, 11@12c; fancy dark, 9@10c; White extracted, 8@8½c; amber, 7@7½c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth
40Atf 2146-8 Central Ave., Cincinnati, O

Wanted! Your HONEY

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JAMESTOWN, N. Y.

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which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO.,
SHEBOYGAN, WIS.

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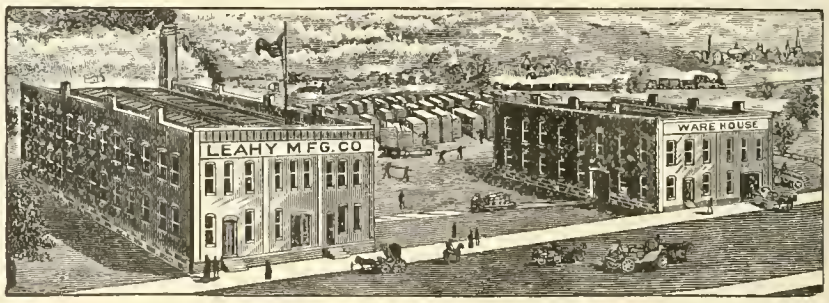

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HONEY-JARS.

1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

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BASSWOOD EXTRACTED HONEY, cans and kegs, 8½ to 9c per pound. Sample 5 cents.
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AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., NOVEMBER 9, 1899. No. 45.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 692.]

The secretary then read Mr. Newman's paper, entitled,

Organization Among Bee-Keepers—If Desirable, Why, and How Best Accomplisht.

This theme was assigned to me by your secretary, and I will briefly give my views upon it.

Is organization desirable? Most assuredly. For the past 20 years I have advocated it, and in 1877 I addrest this association at some length on the subject, presenting a constitution and by-laws which were adopted, but, unfortunately, on account of general apathy they were never put into practical operation.

BENEFITS OF ORGANIZATION.

Our National government—a union of States—suggests the benefits to accrue from a perfect organization. If dismembered, the individual States, acting independently, might clash and antagonize, but, when united, the result is strength, stability and harmonious action, compelling respect and securing to all the enjoyment of their rights and privileges. So with apiarists, their only chance for success, strength and permanence lies in organized efforts, unity of purpose, and concert of action.

Each bee-keeper worthy of the name should unite with a county or district association; this should affiliate with a State organization, and that in turn should be represented in a national association. If we had this kind of organization we could ascertain the yield, and control the honey market, set a uniform price for the crop, and have the product distributed judiciously all over the country. Such a society would be a reliable barometer of the market, and the safe-guard of the pursuit. It could grade the product, guarantee the purity of the out-put, and destroy the nefarious business of adulteration. A central honey-depot could be maintained in the metropolitan cities, to which producers could ship with safety, and receive prompt returns—to the annihilation of fraudulent commission houses.

WHY ORGANIZE?

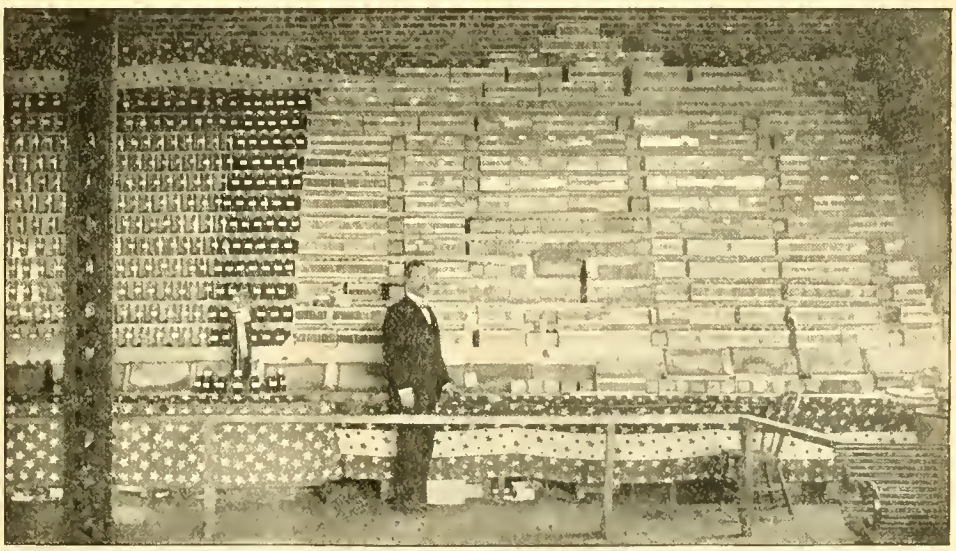
Because the secret of success is to *manage* the honey market. This is far more important than to successfully manage the apiaries, much as that is to be desired. To sell the product—to secure the highest cash price, and to be sure of the proceeds of the crop when sold—these are essential, and tower above all other considerations. They are in fact "the key to success!"

Perfect organization will accomplish this when nothing else will. Neither honey nor any other product will sell itself, but unity of action, brains and push, will do it.

HOW TO ACCOMPLISH IT.

The first successful attempt to organize for protection was the formation of the National Bee-Keepers' Union, which has given the pursuit a standing in court, and now, after 15 years of existence, compels the respect even of the enemies of the pursuit; and defends bee-keepers in their rights—for "unity *is* strength."

Since that your society has resolved itself into a similar organization, and as it seems unwise to perpetuate two of



No. 1.—Mr. J. Q. Smith and the North Half of the Exhibit (Comb and Extracted Honey) of J. Q. Smith & Son, at the Illinois State Fair, at Springfield, Sept. 25 to 30, 1899.—See page 648.

such, it has been proposed to amalgamate them into one. This is no doubt desirable, and I hope that it may be accomplisht, for one strong and united society is more potent than a dozen weak ones. If all are disposed to be fair and just, and treat the members of both organizations with due consideration, I think the time has arrived when the "marriage" may be consummated, and arrangements for the "wedding feast" may safely be made. The "wooing" may have been somewhat discouraging at times, but that is not unusual. The courageous "suitor" often wins the bride after many a repulse and several lovers' quarrels, and this case may be no exception.

As the presidents of both societies are to be present at your meeting, they might agree upon the details for "the marriage settlement," by selecting one of the constitutions and by-laws, including a name for the amalgamated organization, or arrange something entirely new, including a nomination for officers—then upon both societies adopting such and electing the same officers, the uniting will have been accomplisht without friction, and the new organization be ready to begin the new century, and soon become a powerful factor in promoting the interests of apiarists in America.

PERSONAL.

As you are all aware, I have devoted many years of my time and energies to the interests of the pursuit of apiculture. What has been accomplisht is a matter of record. All apicultural societies are alike near to my heart, and have my best wishes for permanent success. Now, on account of declining years, many business cares, and prolonged indisposition, I desire to retire from active service, hoping to have earned the respect and confidence of every apiarist. If the snows of many winters have whitened my brow, a blooming rose is at my heart, and an olive-branch in my hand. Yours fraternally,

San Francisco, Calif. THOMAS G. NEWMAN.

Mr. Selser—I think the most practical discussion on this subject is to get the *modus operandi*.

Dr. Mason—Having been intimately connected with the organization of the National Bee-Keepers' Union and of the United States Bee-Keepers' Association, and knowing all the hard things that have appeared in the bee-papers about the amalgamation of the two organizations, I am glad that the union of the two seems ready for accomplishment.

Some, if not all of you, as well as the members of both organizations who are not here, may be glad to know what has been done towards bringing about this result, so I will, in as brief a manner as possible, explain it. Some of you know that at the meeting of the North American Bee-Keepers' Society in Toronto, Canada, in 1895, measures were adopted with a view to the amalgamation of that society and the National Bee-Keepers' Union. A committee of seven, with Thomas G. Newman as chairman, was appointed to mature some plan for such amalgamation and present it at the next meeting of the society. The committee failed to agree upon a plan, but a plan was prepared and adopted at the meeting at Omaha, tho the National Bee-Keepers' Union refused to adopt it. Since then repeated efforts have been made to secure the union of the two organizations, but without success.

In March last, in writing Mr. Thomas G. Newman, General Manager of the National Bee-Keepers' Union, in regard to preparing a paper for this convention, I suggested the desirability of the union of the two organizations, and that if he agreed with me as to its desirability, it would be a nice thing for him and myself, as we had been leaders in their organization, if we could evolve some plan for their union and present it to this convention as a surprise, and recommend its adoption by both organizations.

In Mr. Newman's reply, of March 14, he wrote me in part as follows:

I am willing to do all my strength will allow for the pursuit. ..... I am not now desirous of fame or honor—have had both to my heart's content, as you are aware. I am greatly interested in a thoro organization for bee-keepers. That has been my aim for many years. I hope it may be accomplisht, even if I do not witness it. The National Bee-Keepers' Union was an effort in that direction, and it has for 15 years been a power for good—an apicultural rock of defense.

And then again on April 1 he wrote:

Your cordial letter of March 22 came several days ago, and would have been answered sooner, but I was unable to do so.

Your explanation of the condition of things is quite satisfactory, and I heartily wish that I could be present at the Philadelphia convention. I know that I would enjoy it very much, for notwithstanding the many harsh words that have cropt out during the past few years, I know that great cordiality exists among bee-keepers, and that they appreciate the work done for the pursuit by the National Bee-Keepers' Union..... You are well aware that during the past 15 or 20 years I have often brought this matter of organization among bee-keepers up before the conventions, and advocated a thoro, representative organization, but the great distances in our country, and the many drawbacks, have prevented its accomplishment. Now we must take another tack and present it in another way, to accomplish this purpose. I will endeavor to outline that way in my paper, and will give you my BEST thoughts on the subject. "Let bygones be by-gones." We must grapple with the PULSATING THOUGHT of the PRESENT AGE.

I wish you would kindly forward me a copy of your constitution and by-laws as amended at your last meeting, so that I may carefully examine the same, and if I find any desirable change can be made I will mention the matter, so that it may be acted upon at the Philadelphia convention. As you suggest, I will give my views to the convention on amalgamation.

And again on April 13 Mr. Newman wrote:

Your letter of April 6 came duly, and its contents are noted. I appreciate most fully its cordiality and general tone, and am glad to be able to reciprocate the many expressions of affectionate remembrances when we have workt together during the many years of the past.

I accept the amendment of my subject, making it now "Organization Among Bee-Keepers—If Desirable, Why and How Best Accomplisht," and as soon as I can find time, and have sufficient energy to put into it, I will give the matter thoro study. Meanwhile, I am very glad to accept your kind offer for "maturing the plan" for amalgamation, and to have everything arranged in advance for the convention to act upon.

I think that the constitution of the United States' Association contains all the essential features of the "National" with some improvements, and if you find it equal to the necessities of the case, let IT be ADOPTED. If you find any amendments desirable, let it be amended accordingly. All I would ask is the adoption of the name, "National Bee-Keepers' Union," and would not ask that did I not think it DESIRABLE as well as ESSENTIAL to success. Let the united wisdom of those present determine everything else. We cannot afford to LOSE the prestige of the "National" carried with its name.

As to officers, EFFICIENT ONES who will WORK are the only ones worthy of the honors. Let such be chosen for the amalgamated organization, and I will then arrange all the officers there selected as "a ticket" to be voted upon at our annual election, and will ADVISE our members to vote it as a whole.

As I will not be able to be present at the convention in body, you may count on my being there in spirit..... You are right in saying that IT TAKES TIME to mature any good plan, and as there are several months to intervene, there will of course be time to do it right, and I know that you will exercise GREAT SKILL in the matter. You may count on my hearty co-operation and assistance at all times.

Again on Aug. 21 he wrote as follows:

Your letter with copy of the program came to hand this morning, just as I was about to mail to you my paper for the convention, which I now enclose in this letter. The subject is a very important one, but I have given only a few hints concerning the lines to be pursued to achieve success, leaving it for the master minds who will be present at the convention to fill in the details, and thus put flesh upon the skeleton that I present.

I should like to be present and assist in arranging the details, but as that is impossible I must be content. If all will work together for the common good, and are willing to sacrifice some of their own feelings or prejudices, considerable good will result. If there is a disposition to be fair and reasonable you may depend upon my working in harmony with you and others to bring about the desired results.

While I am sorry that you did not have time to prepare the constitution, etc., still I have the utmost confidence in your ability to make the same as nearly right as possible. I have no axe to grind. I ask neither dictatum nor position, all I want is the "greatest good to the greatest number." I have had honors innumerable, and words of praise for the work accomplisht from all over the country concerning my management of the National Bee-Keepers' Union for the past 15 years, and it is pleasant to have my work appreciated, but that was not the object before me as an incentive in attaining such great results.

The constitution and by-laws which you will prepare, I know in advance, will receive my entire approbation, and, if I were present we would work together to bring about something that would make the bee-keepers of America proud.

I hope that you may have a very pleasant convention. Please remember me to all old friends.

As Mr. Newman had in substance said that he would be satisfied with what I might prepare to present to this convention, and, being very busy, I had neglected to prepare anything, but immediately on receipt of the above letter on the 25th, I set to work to prepare such admendments to our present constitution as seemed desirable and necessary for the union of the National Bee-Keepers' Union and the United States Bee-Keepers' Association, so as to send them to Mr. Newman and get his criticisms and suggestions in time for this convention, asking him to direct his reply to me here. His reply was handed me here during our last evening's session, and is as follows:

MY DEAR DR. MASON:—Yours of the 26th, from Toledo, is just received, and I reply immediately so that you may get it at the convention.

I have read the amended constitution carefully, and heartily approve every part of it. The two blanks that you have left would be very properly filled, as you have penciled, for the directors should be nine. The term of office would be better for three years than one, and to have an election each year to give the membership a chance to vote for one-third of them would be advisable, I think.

As to the "declining" of one to make the nine, I hope you will allow ME to DECLINE a position on the board of directors; not that I would desire to shirk any duty, but I have too much to do for my physical strength. I shall be pleased at any time to render advice, or do anything in my power to assist in the management. As I have had 15 years' experience, something may come up upon which I could give valuable information or advice. This plan would leave out every possible cause for friction, for there are some, of course, who do not like me, for I have "convictions," and will STATE them, and you know that a man who has no enemies is not of much force or good in this pushing world. I shall be well satisfied in any event, and will help to bring the consolidation to a successful issue by every means in my power.

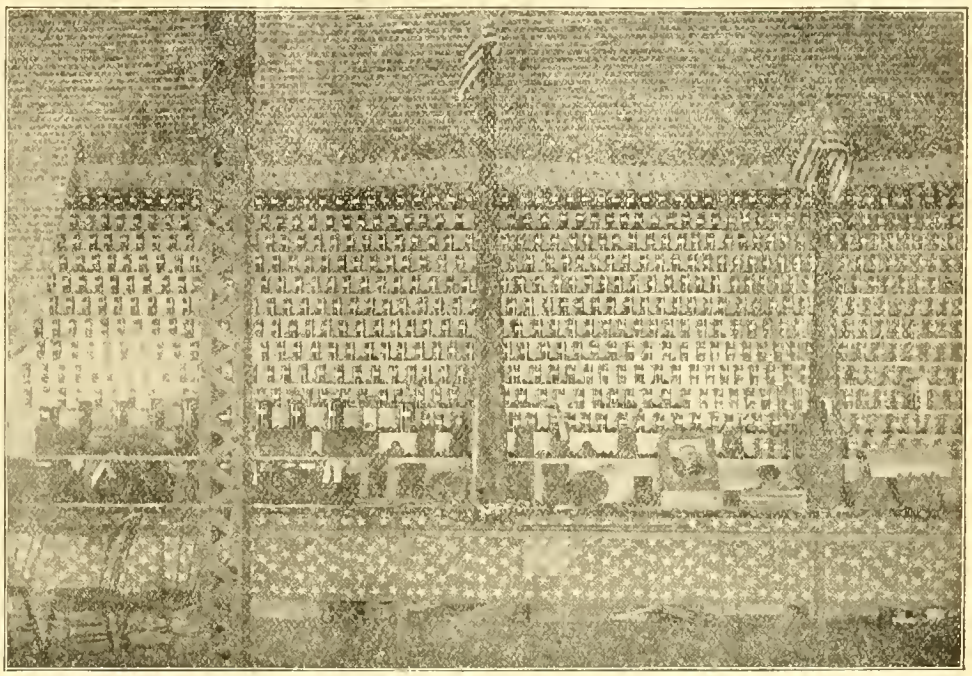
One other thing I might mention. I see that you have adopted the name, "National Bee-Keepers' Union;" of course, because of the history and achievement of the old Union, but I never liked the word UNION. It has been abused so much all over the country by being attacbt to lawlessness and intrigue, so that if the majority of those present at the Philadelphia convention should prefer the word Association, it will receive my hearty approval.

One more point. I see you have attacht to this constitution our names. I prefer to have yours first, as it should be, as you are there present to present it. It is your work, and you are entitled to the credit. I simply heartily approve of the work you have done, joining with you in presenting it, therefore please transpose the names.

Now, with the heartiest wishes for concord and earnest and active work, with the blessings of united and harmonious labors, and with kindest regards to all who are present, to deliberate upon the best means of accomplishing the work before the convention, I remain,

Fraternally yours,
THOMAS G. NEWMAN.

Altho I believe Mr. Newman meant just what he said, whatever we do here "will receive my entire approbation," still this last letter was a thoro surprise to me.



No. 2.—South Half of the Exhibit (Extracted Honey and Beeswax) of J. Q. Smith & Son, at the Illinois State Fair, at Springfield, Sept. 25 to 30, 1899.—See page 648.

I at first suggested to Mr. Newman the name of the new organization be "The National Bee-Keepers' Union," because we could not afford to lose the influence that name carries with it. I also corresponded with the leading officers of both organizations, and two others of our leaders regarding the name. All except Mr. Newman and one other that I corresponded with are here to-day, and all except two were in favor of the old name. One of the two didn't care what was done, and the other didn't like the word "Union," preferring "Association" instead. For my own part, I prefer the name "Association" to that of "Union" for the reasons given by Mr. Newman, and now that he, as the representative of the "Union," has said that "if the majority of those present at the Philadelphia convention should prefer the word Association, it will receive my hearty approval," it seems that all points of disagreement are settled, and nothing remains to be done but for the members of both organizations to express their approval of what has been done and of the proposed constitution, which, in behalf of Mr. Newman and for myself, I now propose as follows:

The Amended Constitution.

ARTICLE I.—NAME.

This organization shall be known as the National Bee-Keepers' Association.

ARTICLE II.—OBJECTS.

Its objects shall be to promote the interests of bee-keepers; to protect and defend its members in their lawful rights; and to enforce laws against the adulteration of honey.

ARTICLE III.—MEMBERSHIP.

SEC. 1.—Any person who is in accord with the purpose and aim of this Association may become a member by the payment of one dollar annually to the General Manager or Secretary; and said membership shall expire at the end of one year from the time of said payment, except as provided in Section 10 of Article V of this Constitution. Any person may become an honorary member by a two-thirds vote of all the members present at any annual meeting of this Association.

SEC. 2.—Whenever a local bee-keepers' association shall decide to unite with this association as a body, it will be received upon payment by the local secretary of 50 cents per member per annum, providing that the local association's membership dues are at least $1.00.

ARTICLE IV.—OFFICERS.

SEC. 1.—The officers of this Association shall be a President, a Vice-President, a Secretary, and a Board of Directors, which shall consist of a General Manager and 12 Directors, whose term of office shall be for four years, or until their successors are elected and qualified, except as provided in Sec. 2 of this Article.

SEC. 2.—E. Whitcomb, W. Z. Hutchinson and A. I. Root shall be directors until Jan. 1, 1901; J. M. Hambaugh, Dr. C. C. Miller and C. P. Dadant shall be directors until Jan. 1, 1902; Thomas G. Newman, G. M. Doolittle and W. F. Marks shall be directors until Jan. 1, 1903; and E. R. Root, P. H. Elwood and E. T. Abbott shall be directors until Jan. 1, 1904. Hon. Eugene Secor shall be General Manager until Jan. 1, 1901.

SEC. 3.—The President, Vice-President and Secretary shall be elected annually by ballot by a majority vote of the members present at the annual meeting of the Association.

SEC. 4.—The President, Vice-President and Secretary shall assume office on the first day of January succeeding their election, and shall constitute the Executive Committee.

SEC. 5.—The General Manager and the Board of Directors to succeed those whose term of office expires each year, shall be elected by ballot during the month of December of each year by a majority vote of the members voting; and the Board of Directors shall prescribe how all votes of the members shall be taken.

ARTICLE V.—DUTIES OF OFFICERS.

SEC. 1.—*President*—It shall be the duty of the President to preside at the annual meeting of the Association, and to perform such other duties as may devolve upon the presiding officer.

SEC. 2.—*Vice-President*—In the absence of the President the Vice-President shall perform the duties of President.

SEC. 3.—*Secretary*—It shall be the duty of the Secretary to keep a record of the proceedings of the annual meeting; to receive membership fees; to furnish the General Manager with the names and post-office addresses of those who become members, whenever requested of him; to make a report at the annual meeting of the Association, and, whenever requested to do so by the Board of Directors, of all moneys received and paid out by him since the last annual meeting: to pay to the Treasurer of the Association all moneys left in his hands after paying the expenses of the annual meeting: and to perform such other duties as may be required of him by the Association; and he shall receive such sum for his services as may be granted by the Board of Directors.

SEC. 4.—*General Manager*—The General Manager shall

be Secretary of the Board of Directors and Treasurer of this Association; he shall receive membership fees, giving a receipt therefor; he shall keep a list of the names of members with their post-office addresses; he shall notify each member of the time of the expiration of his membership at least 30 days before said membership expires, and ask for a renewal of said membership.

SEC. 5.—Whenever one or more amendments of this Constitution have been proposed as provided in Article IX, it shall be the duty of the General Manager to submit the proposed amendment or amendments to a vote of the members at the time of the next annual election of officers for adoption or rejection.

SEC. 6.—At the time of sending the ballots to the members for the annual election, the General Manager shall also send to each member a list of the names of all members, and an itemized statement of all receipts and expenditures of the funds of the Association by the Board of Directors, and a report of the work done by said Board of Directors.

SEC. 7.—The General Manager shall give a bond in such amount, and with such conditions as may be required and approved by the Board of Directors, for the faithful performance of his duties, and perform such other services as may be required of him by the Board of Directors or by this Constitution.

SEC. 8.—The Board of Directors shall pay the General Manager such sum for his services as said Board may deem proper, but not to exceed 20 percent of the receipts of the Association.

SEC. 9.—The said Board shall choose its own chairman, and shall meet at such time and place as it may decide upon, and shall determine what course shall be taken by the Association upon any matter presented to it for consideration, that does not conflict with this Constitution; and cause such extra but equal assessments to be made on each member as may become necessary, giving the reason to each member why such assessment is required; provided that not more than one assessment shall be made in any one year, and not to an amount exceeding the annual membership fee, without a majority vote of all the members of the Association.

SEC. 10.—Any member refusing or neglecting to pay said assessment as required by the Board of Directors shall forfeit his membership, and his right to become a member of the Association for one year after said assessment becomes due.

ARTICLE VI.—FUNDS.

The funds of this Association may be used for any purpose that the Board of Directors may consider for the interest of its members, and for the advancement of the pursuit of bee-culture.

ARTICLE VII.—VACANCIES.

Any vacancy occurring in the Board of Directors may be filled by the Executive Committee; and any vacancy occurring in the Executive Committee shall be filled by the Board of Directors.

ARTICLE VIII.—MEETINGS.

This Association shall hold annual meetings at such time and place as shall be agreed upon by the Executive Committee, who shall give at least 60 days' notice in the bee-periodicals of the time and place of meeting.

ARTICLE IX. AMENDMENTS.

This Constitution may be amended by a majority vote of all the members, provided notice of said amendment has been given at a previous meeting.

ARTICLE X.

SEC. 1.—The above proposed amendments to the Constitution of the National Bee-Keepers' Association are made with the expectation that they will be adopted by the members of both organizations for the purpose of uniting them into one, but should the members of the National Bee-Keepers' Union reject the above proposed Constitution, then the vote of the members of the United States Bee-Keepers' Association shall be null and void.

SEC. 2.—Should this proposed Constitution be adopted by the above-named organizations, such disposition shall be made of the moneys and other properties of the two organizations as shall be agreed upon by the Advisory Board of the National Bee-Keepers' Union and the Board of Directors of the United States Bee-Keepers' Association.

SEC. 3.—All those who are members of the National Bee-Keepers' Union, and those who are members of the United States Bee-Keepers' Association at the time this Constitution is adopted, shall be members of this Association until such time as said membership will cease in the Union or Association to which they belong at the time of the adoption of this Constitution.

Proposed by { THOMAS G. NEWMAN, A. B. MASON.

Mr. Root—Can we not discuss each section as we go thru?

Mr. Doolittle—I don't see why this Constitution as read is not good enough with the exception of changing the name Union to Association.

Mr. Abbott—One of the things seems to be that the National Union is swallowing up the Association. I made up my mind when the first sentence was read that I would stand here until Gabriel's trumpet sounds to fight for the Association. But it seems to me that the friends can see neither is being swallowed up.

Dr. Mason—It seems to me that there is no swallowing up.

Mr. Wander—Why do they want the voting on our side first?

Dr. Mason—Both societies vote in December.

Mr. York—This Constitution is not for us to adopt now, but simply to consider and recommend for adoption.

Dr. Miller—Let us have clear and full knowledge of the meaning of the matter before us. We need to have full information.

Dr. Mason—No one can tell you what it will *mean*. The future will tell that.

Mr. Stone—I do not clearly understand. Suppose we vote this, we have elected our officers.

Dr. Mason—The directors are named here. Provision is made for putting all the members of both old boards on the new board, and also adding W. F. Marks and P. H. Elwood, of New York, as new members.

Mr. Root—Even if we were not marrying these associations, it seems to me that the Board of Directors, which consisted of six, was a little too small. This proposition provides for 12 directors.

Mr. Selser—As I understand it, *our* members vote in December. If *we* cannot vote upon it now, why bother with it?

Dr. Mason—Our Constitution requires that notice of any proposed amendment shall be given at an annual meeting before it can be voted on by the members of this Association, and the object in discussing the matter here is, so that if we see fit, we may recommend the adoption of the amendments by the members: just giving the matter our endorsement.

Mr. Doolittle—There has been some friction, and I think if this goes to the Pacific Coast that we are united, it will help us.

On motion it was voted that this convention recommend the adoption of the proposed amended Constitution.

W. L. Coggshall, of Tompkins Co., N. Y., on being askt his opinion on a certain subject, said he could "operate bees better than talk."

Thad. H. Stevens—How many colonies have you, Mr. Coggshall?

Mr. Coggshall—1,300.

Mr. Keeler—What kind of bees have you?

Mr. Coggshall—Italians.

Mr. Keeler—Do you keep them at a distance from your dwelling-house?

Mr. Coggshall—If it is more convenient.

E. R. Root—Do they sting as they did when I was there?

Mr. Coggshall—No, the bees wanted to give you a touch of their ability in that line of business, and the boys stirred them up for your special benefit.

Mr. Howe—In extracting honey the last record we made was 1,400 pounds in 1¼ hours.

E. R. Root—I don't know what a record is in that line, and I want to know if any one has a better record. How do you handle the combs?

Mr. Howe—We put the combs in the extractor just as they hang in the hives, and when one side is extracted we take one comb in the left hand and one in the right and change places with them without turning them, and you can see it is very quickly done.

Dr. Mason—Who uncaps the honey?

Mr. Howe—We do the extracting before the honey is capt. By having everything convenient we can do it in a very short time.

Pres. Whitcomb—What do you do with the honey afterwards?

Mr. Howe—Sell it.

Mr. Hershiser—My opinion of extracted honey is that it is sent out in very bad shape. Sweet clover honey is very thin if extracted before it is sealed over.

Mr. Root—Mr. Coggshall claims to have no one at his out-apiaries. How does he take care of them?

Mr. Coggshall—Large hives are of vital importance.

Mr. Root—How do you put up your honey?

Mr. Coggshall—In kegs. To put it in cans would take one extra hand.

O. O. Poppleton—In a warm climate, in extracting honey, we have the frames put in the extractor as they hang in the hive, instead of on the end. In Cuba we used to run two hands at $8 a month during the time we were engaged in extracting. We have extracted as high as 2,000 pounds in one day. My tank was so arranged that we could tell just how much there was in it.

Mr. Coggshall—One thing I want to speak of is the importance of getting the bees off the combs. We go to one end of a row of hives, raise the oilcloth, puff in a little smoke, and the bees will go down if you give the end of the oilcloth a little shake up and down for a minute or half a minute. The motion makes a suction.

F. Danzenbaker—I have noticed that when it was warm the bees would get up motion. Just give them a little smoke.

Dr. Miller—Suppose you use no oilcloth, do you think it worth while to have the cloth?

Mr. Coggshall—Certainly.

Mr. Root—By using the suction motion the result was, most of the bees would drop.

Pres. Whitcomb—I think it is a dangerous thing to let it go out that we sell honey extracted without capping.

A sample of honey extracted before capping was shown.

Pres. Whitcomb—This is not honey—it is nectar.

Mr. Root—This honey ran 12 pounds to the gallon. Nebraska is the only State that will produce honey that weighs 13 pounds to the gallon.

Mr. Selser—Mr. President, I think the matter that you spoke of should be well aired.

Put the honey in the sun to ripen. It is a fact, and I am sorry, that honey is extracted before it is ripe. It is *not* honey; it is nectar. Honey, as far as weight is concerned, depends largely upon the temperature to which it has been exposed. I do not think the impression should go out that honey is not ripened. I would like to ask Mr. Best what his experience is.

Mr. Best—If honey is not well capt it will not keep in our locality, but if it is capt it will keep.

Mr. Hershiser—I think it is easy to tell if honey is fit to extract. Just turn the comb over, and if the honey falls out it is not ripe, and should not be extracted.

R. B. Chipman—I think I have handled honey as much as any one who extracts. Localities differ. Honey that has soured the quickest with me is honey that has not been capt. The only right way to handle honey is to put it in cans and never handle in any other way. Did the president test accurately the honey that weighed 13 pounds?

Pres. Whitcomb—Yes. Heart's-ease honey that was exhibited at the World's Fair has not yet granulated. I took it home in November. A man in Canada said Cuban honey should weigh 13 pounds. I take it that honey is ripe, under ordinary conditions, that weighs more than 11 pounds.

Mr. Selser—All honey is 23.5 percent water. The weight of honey depends upon the amount of water in it.

The convention then adjourned until 7:30 p.m.

[Continued next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 719 are well worth working for. Look at them.

CONTRIBUTED ARTICLES

How to Prepare the Bees for Winter.

BY G. M. DOOLITTLE.

A CORRESPONDENT wants to know when it is best to prepare his bees for winter, and thinks it will be better to wait till the brood is out of the way in November, at which time he can fix them up and feed them so that they can carry the food right into the center of the brood-nest where the brood has lately hatcht. I have been writing some of late on this subject, but as the questions still come in, it may be well to say a few words more along the line of getting the bees ready for winter.

To the above I would say, don't on any account wait till cold weather comes before fixing the bees for winter, for, if you do, winter will be almost sure to come and find your bees not ready for it. Years ago I used to think that the middle of November was time enough to look after the winter necessities of the bees, but when that time came something would occur so that I would think that waiting a few more days would do no harm, and so I kept putting it off and putting it off till I was caught by snow and freezing cold weather, and, as I write, I remember about writing an article telling how I had equalized the stores of certain colonies when the mercury was near zero, considering that I had accomplisht quite a feat in doing it. Well, the next spring found me mourning the loss of many bees, and, upon asking, I received advice from that great writer of yore—Elisha Gallup—telling me that the months of August and September were the ones in which bees should be gotten ready for winter. After profiting by this advice for many years, I am sure he was right, and more especially so where the bees have not stores enough to carry them thru to the next honey harvest.

If there is one item above another, having great importance in the wintering problem, it is the securing of the winter stores near and about the cluster of bees in time for them to settle down into that quiescent state so conducive to good wintering, prior to the middle of October, in the more northern localities.

To arrange these stores properly and seal them requires warm weather; hence all will see the fallacy of putting off caring for them till cold weather arrives, as is the thought exprest by our correspondent.

To be sure that all have the desired amount of stores, there is only one certain way to do, and that is to open the hives and take out each frame and weigh it, after having shaken the bees off. Next weigh a frame of empty comb, or several of them, so as to know the average weight, which, when deducted from the weight of those in the hive, will give the weight of honey, note being made in all cases of the amount of pollen the combs contain, their age, etc., and the necessary allowance being made accordingly.

Not long ago I saw it advised to put into an empty hive the number of combs used in wintering, and weigh the hive so arranged, when the hives in the apiary were to be weighed, the amount of the other deducted, and if there was 20 pounds left above this deduction there would be sufficient stores in that hive for wintering on the summer stands, and if there was 15 pounds it would do very well for cellar-wintering. No one could make any mistake in calling such a method a careless procedure, and one which would tend toward making wintering a failure. Hives subject to the weather weigh more than dry hives do that are liable to be taken from the store-room; colonies of bees differ very much as to size and weight; old combs weigh double that of new ones; combs from a colony which was queenless for some time during the summer will often contain pollen to one-half of the amount allowed for cellar-wintering; hence these and other factors make that method of procedure little better than guesswork.

Again, the amount named is too little by far, were this all available stores. If after going over a hive and weighing each comb as I have given above, I find that there is 25 pounds of actual stores, I call that hive or colony all right for winter. If less, it must be fed the deficiency; if more, it can spare some to help another colony which is lacking in that amount. In this way the whole apiary should be

gone over, equalizing and feeding, if it is required, until all have the requisite 25 pounds.

But I hear some one say, "It would be a fearful job to shake the bees off from every comb in a colony and weigh each comb separately." Well, so it would be if done with each colony, yet I think it would pay in the long run, even then; but you will have to do this with only two or three till you get the right conception of just how much honey there is in each frame, by simply lifting it from the hive and looking at it, when you can count off the number of pounds almost to a certainty, and do it as rapidly as you can handle the frames. However, you will have to weigh a few if you have never practiced this plan, to give you the necessary training required, after which you can count off combs of honey so as to rarely vary more than a pound or two, and when the apiary is thus gone over there is a certainty about it which always gives success, besides we can say we positively *know* in this matter, which is a great satisfaction, to say the least.

But another letter before me asks for my plan of making winter food where there are not stores enough for wintering in the whole yard, after equalizing. I have given my formula several times of late, but as I have had several calls for it during the past two weeks, I will briefly give it again:

In a vessel of sufficient size put in 15 pounds of water. Set over the fire till it boils, then stir in 30 pounds of granulated sugar. Allow the whole to boil again, set from the fire and stir in 5 pounds of extracted honey. When cool enough it is ready for feeding, and gives about 50 pounds of feed, which is fully equal if not superior to the best honey.

Another writes, "Is not tartaric acid or vinegar as good for keeping the syrup from crystallizing as the honey?" My answer to this is *no*. There is nothing I ever tried which will equal honey, and I would have the honey, even if I had to send into another State for it, and pay more than it was worth in the market, at that.

But still another writes me, "I am fraid of getting foul brood with the honey." To my mind, there need be no fears on this score, for, were you to be unfortunate enough to get foul-broody honey it would not carry the disease to your bees if none of it was secured by them in any other way than in the food, for, according to all of my experience of the past, the boiling syrup will scald the honey sufficiently so as to kill all germs of foul brood, if the food is made as I have given.

I regret to know that there must be such a general wholesale feeding in many portions of our country this fall, on account of the poorness of the season of 1899.

Onondaga, Co., N. Y.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Moldy Combs in the Spring.

I have kept bees for three years and each spring my combs are very moldy and my bees weak. Two years ago, out of 7 colonies only one gave either swarms or surplus. Last winter I wintered 12 colonies with but one lost, leaving me 11, and from them I got about 25 pounds per colony, not allowing them to swarm.

In the American Bee Journal for Oct. 5, it speaks of preparing a winter-case for bees, which started me to thinking. I have several old hives and I find by knocking out the front end my hives will sit inside of these big hives with ½-inch space around three sides. The hives have porticos with a second story that telescopes over the main hive.

Our winters are very wet with but little sunshine. Bees winter much better in trees than in hives. How will it do if I put my hives inside and put a cushion of planer-shavings over the hive in a super, and close the half-inch space with a wedge at the front to keep the wind and mice out?

We have no 30 degrees below zero to contend with, nothing but dampness, and bees generally have a good flight every three or four weeks all winter. I have now 38 colonies in good condition as far as stores are concerned.

Snohomish Co., Wash.

ANSWER.—Probably the packing you speak of will be all right, but from what you say I have just a little suspicion that your bees do not have a sufficiently large entrance. With too small an entrance in a damp climate, you will be sure of moldy combs and more than the proper amount of dead bees. The trouble becomes aggravated in the course of the winter by the clogging of the entrance with dead bees. Let the full entrance be given as in summer, and see that the dead bees are cleaned from it every few weeks.

Hive-Ventilation in the Cellar.

My hive-bottoms are nailed on solid, and cellar is damp, and in winter stands only a few degrees above freezing. Do you think it would be best to raise the hive-covers? I did so last winter, and now I read that if the bees are cold they will use more honey, and my bees have gathered but little this season and will need all they have to tide them over until honey comes next year. MINNESOTA.

ANSWER.—Whether the hive-covers should be sealed down tight or not in the cellar depends upon how much ventilation there is below. The bees must have air somewhere. They may be sealed up tight at the bottom if there is enough ventilation at the top, and vice versa. If the hive is open below to the extent of having an entrance of 12 square inches, or anywhere from that to being entirely open on all four sides below, there need be no ventilation at the top. If the entrance be only equivalent to six square inches or less, and especially if part of this entrance be clogged with dead bees, then it is better there be some ventilation above. But much less ventilation is needed where it is given both above and below. An eighth-inch crack at the top will be enough.

Management of Swarms.

1. I want to get about 25 colonies of bees next year, and can get them only by catching the swarms. One bee-keeper here keeps about 45 colonies, and I will get all the swarms he will have. But I want to get all the surplus I can the same year, so I will put two or three swarms together, that is, put an after-swarm with the first or prime swarm, but I don't know what to do with the queens, which one to leave in the hive, the one in the prime swarm, or the one in the after-swarm. If it is best to leave the one in the prime swarm, how can I get the one in the after-swarm the easiest way?

2. Will not the bees swarm out if the laying queen stays in the hive, when the hive is so filled with bees?

3. Can I unite the after-swarm with the first swarm right after issuing, or will it be better to wait a few hours?

4. How much room at a time should I give to each of the colonies consisting of two or three swarms? Will a 2-story 8-frame dovetail hive do? That is, one story and two supers.

5. About what might be the average number of swarms per day from 45 colonies? Rice Co., Minn.

ANSWERS.—1. Your intention being to unite two or more swarms in one hive so as to have a very strong colony, probably your best plan will be to unite two prime swarms that come out within a few days of each other, and unite two or more second swarms issuing near together. Let the bees settle which queen they will retain.

2. There will be a chance that a swarm may be thrown off, but not much more of a chance than with a single strong swarm.

3. As already mentioned, it will be better not to unite the second swarm with its prime swarm, for the two will be a week to 10 days apart, but unite two prime swarms that come nearer together, and two or more after-swarms that come near together.

4. An 8-frame hive with two supers will be enough for a large colony, but if these are crowded with bees and they seem to need more room, by all means give it.

5. The number of swarms issuing from 45 colonies will vary greatly, according to season, size of hives, and character of bees. In a very poor season, not a single swarm

may issue, no matter what the size of hive. With large hives such as the Dadants use they do not have more than two colonies out of 45 to swarm in a whole season. With bees inclined to swarm, kept in 8-frame hives, with the right kind of a season, there may be from one to ten swarms a day thru a period of two to six weeks.

THE AFTERTHOUGHT

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

TIME BETWEEN THE PRIME AND THE SECOND SWARM.

On page 618 we have Critic Taylor's record of *ten* second swarms, the day-intervals after the prime being 5, 7, 7, 8, 8, 9, 9, 9, 9, 10. Beats me one day in having a five-day interval; but I beat him "all hollow" in the other direction. He must remember that one year's records (or even a few years' records) are quite insufficient. In this respect one year differs greatly from another even in the same yard. Presumably localities and strains of bees differ widely also—must do so if the eight-day period some writers cling to (a little bit fanatically it seems to me) is even tolerably correct. With me more swarms issue at 13-days' interval than at 8—that is, they did up to my last counting-spot six years ago. At that time I went laboriously over the whole of my past records and found 299 recorded intervals. And this is the way they show up:

At 6 days..... 3	At 12 days.....39
At 7 days..... 6	At 13 days.....34
At 8 days.....32	At 14 days.....24
At 9 days.....48	At 15 days..... 6
At 10 days.....46	At 16 days..... 9
At 11 days..... 48	At 17 days..... 4

Generally speaking, the more reluctant bees are to swarm, the shorter the interval will be; and the worse the swarm-fever rages—that is to say, the *less preparation* there is at the first swarming—the longer it will be before they *can* swarm again. If they swarm without any preparation at all, and then hold the young queens prisoners in the cells a day or two, we get a 17-day period, as above.

THE ONCE-FOR-ALL MANIPULATION.

Comrade France's once-for-all spring manipulation is quite a variation from the once-a-week-and-oft-between-times method that is more frequently recommended—and both vary some from the whenever-you-feel-like-it method of the bee-feverish beginner. Page 609.

THE BEE-GRAPE QUESTION.

Anent the bee-grape question, ably handled by C. P. Dadant, page 609, I would suggest that *denying too much* often has the effect to confirm our grape-raising friends in their opinion that all our talk is special pleading and nonsense. Let us be careful about that. It is beyond denial that when a man not inured to stings wants to pick grapes it is a miserable nuisance to have the bunches covered with bees. A few kindly expressions of regret will go farther than a ton of argument just then. What does he care—the man with one eye closed, and hands swollen too stiff for service—whether (theoretically) bees can puncture grapes or not? We'll only set him to breaking commandments by the evasion of non-evadable facts. The proofs we have to offer have their application, yet they really don't cover the whole ground—more's the pity. We cannot answer him when he sings—

> O thou beautiful, dutiful, honeyful bee!
> That you don't puncture grapes I may yet have to see;
> But I'll show any court in this "bloomin countree,"
> That you puncture me.

THAT BEAUTIFUL APIARY.

A beautiful picture and beautiful apiary is that shown on the first page of Oct. 5—honey record beautiful, too. We say at once, How beautiful is art, How beautiful is nature, How beautiful is solitude! Kind o' startles us to be told we are looking at a spot inside city limits. You're one of "dose happy bee-mans," Mr. Herman. All the ground is covered thick with tan-bark. Splendid—except that I should fear that in some desperate drouth a lurking spark from the smoker might send the whole thing up in a blaze. Or is spent tan, on the ground, always fire-proof? A little ashamed to confess that I don't know. I do know that I hate weeds, and don't like grass much better—neither do I love the amount of hoeing that I have to do in my apiary.

BEE-ZINC—"MAKING" HONEY.

Doolittle, on page 626, evidently doesn't think much of excluders that only go part way. Hits me. All my extracting-supers have more than half the bottom covered with plain tin. I do not *think* that I lose materially by it; but I am hardly prepared to prove it. He is probably right about the case in hand, which had the center closed. I have a strip of perforated metal clear across the center, and plain tin strips on the two sides. Doolittle is right, also, in sailing in some more into the stubborn nonsense that bees want a path direct from the flower to the surplus cells. It is nearer the truth to say, with the unenlightened public, "Bees *make* honey," than to say they merely lug it home and dump it like stovewood into a wood-box.

SOUND ON CELLAR-DOORS.

On page 626, Wm. M. Barnes is sound on cellar-doors—inch of dead air space *within* each door, and three feet of dead air between the two doors.

FOUL BROOD IN CUBA.

Sad to hear, as we do from W. W. Somerford, page 627, that all men and methods fail to cure foul brood in Cuba. With endless summer and infection everywhere, scientist and anti-scientist, doctor and faith-healer, alike "get left"—without bees.

SOME PRAYERS WISELY UNANSWERED.

Unanswered prayer. It seems, page 629, that the father of Mr. Doolittle prayed that he might fail with his bees. I suspect that a vast number of unanswered prayers are as unwise as that one was.

BLAMING THE BEES FOR RATTLESNAKES.

Judge Terral, page 629, is rather extreme in blaming the Holy-Land bees for the rattlesnakes in his apiary. Good example of the way a legal man can "soc et tuum" when he undertakes. (Snakes came because the weeds were tall, and weeds were tall because the bees considered their land too holy to have hoeing or mowing there.)

PINK COMB AND CRIMSON CLOVER.

That pink comb from crimson clover, eh?—and pink honey, ditto. Let's keep that in mind till we can disprove it—or prove it. Page 633.

BEES THAT "WON'T GO HOME TILL MORNING."

In the Question-Box, page 634, Utah strikes a fresh and breezy sort of question—whether bees ever stay out all night—

> Where is my wandering bee to-night,
> Where is my wandering bee?
> My heart overflows,
> And I love her she knows,
> Where is my wandering bee?

Most of the senators are prompt and sure in the affirmative. Half-a-dozen have doubts—else a fit of "the contrairies." Mr. Green says not intentionally in any case. Probably true that they never *prefer* a lodging on a leaf to a lodging at home; but they will deliberately go to the woods when it will certainly be so dark that they dislike to fly before they can get a load and return. One of the unexplained mysteries of the bee is why at eve the change from readiness to fly, to great reluctance to fly, comes on so suddenly—get hundreds of bees on your clothes, and find it almost impossible to get them off, if you don't look a little out. I once had a case where many bees were robbing a room in the house where they had found some plunder. As the light began to fade many dozens of them got together in a corner of the room with evident intent to spend the night there, altho their hives were only a few rods away. I had let them alone till eve as the cheapest way to get rid of them—and was disgusted to find that I had to go to work and put them out.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. NOVEMBER 9, 1899. NO. 45

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Running Bees by Books is the heading of an item in Gleanings in Bee-Culture, which reads thus:

Bee-keepers tell me that I run my bees too much by the books; but my crop is over 60 pounds per colony, spring count, and theirs from 25 down to nothing.

L. L. TRAVIS.

A good book reinforced by a good bee-paper can hardly fail to put one's yield above the average of his neighbors who go bookless and paperless. Editor Root well says in his comment on this item: "The proof of the pudding is in the eating."

The Chicago Bee-Keepers' Association held its semi-annual meeting in the Briggs' House, Thursday, Nov. 2. On account of the stormy weather there was not a very large attendance. Rev. E. T. Abbott, of Missouri, was present, and helpt to make it a profitable occasion.

The editor of the American Bee Journal was elected president, and Mrs. N. L. Stow as vice-president, and H. F. Moore as secretary-treasurer, were both re-elected. A report of the proceedings will be publisht later.

Sweet Clover as a Honey-Plant.—Mr. H. R. Boardman, of Huron Co., Ohio, says in Gleanings in Bee-Culture for Oct. 15, in reference to sweet clover: "I think it is the most valuable honey-plant in the whole world when compared acre for acre." We think so, too. Had it not been for sweet clover in the region around Chicago this year there would have been practically no surplus honey at all. When it is known that it seldom fails to yield some nectar, and almost always produces richly, we believe bee-keepers will sow it more than ever. The honey is all right after one gets accustomed to using it, just like many another honey, and if found desirable basswood or other flavored honey can be added to it, thus forming a splendid article.

United States Bee-Keepers' Association.—We have received a neat little 4-page folder gotten up by General Manager Secor in the interest of this association, which ought to result in securing many members. It reads as follows:

THE UNITED STATES BEE-KEEPERS' ASSOCIATION

Was the natural outgrowth of a feeling among bee-keepers that they would have to look after their own interests, defend their own rights, and protect their own good name, or suffer the consequences. Other associations of other industrial occupations suggested the power of organized effort.

It is a little strange that an industry as old as bee-keeping is known to be, should be assailed, but in the complicated arrangement of modern civilized society, there are so many possible encroachments on the rights of others it is difficult to satisfy the demands of over-jealous dispositions.

Bees are "free commoners." They have no regard for the usual barriers which restrain other domestic animals. They forage where they will without regard to individual ownership or personal wishes. Well-informed people recognize their services as necessary to the complete fruitfulness of numerous flowers and fruits. But ignorance and stupidity look with jealous eyes upon the insignificant toll taken by the bee for her part in making the earth more fruitful.

Some persons have been found so devoid of reason and sense that they purposely scatter poison to kill their best friends, the bees.

Others living in or near towns innocently imagine that bees were made only to sting, and they would fain banish every bee-keeper from the bounds of urban society.

Others there are who purposely pervert the taste of the multitude by the sale of vile mixtures called honey, which never came in contact with a bee—that were never sipt from fragrant flowers, nor stored in her waxen cells. They are the corruptors of common honesty. The adulterators need to be brought to justice.

The enactment and enforcement of pure food laws is not only desirable from every consideration of public morals and health, but is especially to be desired by bee-keepers who suffer from the unjust competition of cheap fraudulent compounds.

Experience has shown that there are persons engaged in the commission business who live upon the credulity of the consignors. This class needs to be watcht and reckoned with occasionally.

And then there are the advantages which acquaintance brings to the members of fraternal associations.

Improvement and education along the lines of our industry, and a community of interest are some of the additional benefits to be derived from an association of bee-keepers.

Every person who believes there are reforms to be inaugurated or present laws to enforce, rights to maintain, or unjust prosecutions of bee-keepers to defend, is invited to join this association. There ought to be a membership of one thousand.

We shall be glad of your influence and help. Send $1.00 to the undersigned, which will constitute you a member for one year and entitle you to a vote at the annual election by mail, and a copy of all reports issued.

EUGENE SECOR,
General Manager and Treasurer.
Forest City, Iowa.

All who desire may send their dollars to the Bee Journal office if more convenient, and we will forward them to Mr. Secor, who will then mail the receipts.

Irregularities of Seasons.—Under the head of "Uncertainties of Bee-Keeping," Harry Lathrop gives in Gleanings in Bee-Culture the results of 15 seasons in Wisconsin. There was one total failure for every five years, one heavy crop every three years, and seven medium crops in 15 years. The editor wisely thinks this is better than the average locality will do.

"The Reformed Spelling" is the caption of an article in Gleanings in Bee-Culture, by E. B. Thornton, in which Mr. Thornton makes a strong plea for a better spelling, quoting from the editor of the Independent, as follows:

The editor of the Independent puts the matter in its true light when he says that the whole matter is one that "properly belongs to the societies for the prevention of cruelty to children." "The weariness, the tears, the blotted copybooks, the nervous strain we put on our children, are our shame".....".....We are often told that our children are far more backward than the children of other languages. How can it be otherwise? The time that we waste in learning to read and spell, a German or Spanish or Italian child can give to his arithmetic and geography." .....".....Many more children could go to the high school and to college if their years and their patience had not been exhausted in useless labor at the very threshold of learning."

Pitman tried for 50 years to make a complete job of it on a thoroly phonetic basis, and he accomplisht little more than to call attention (not always favorable) to the subject. American reformers in the meantime have brought forward not less than a dozen different systems, but no one would adopt them. The trouble with them all is that they are *too* good. They go too far. The only advance that has ever been made on this line has been made by the step-by-step method—a word, or a class of words at a time.

Mr. Thornton pleads for the spelling recommended by the National Educational Association in the following list:

Program (programme); tho (though); altho (although); thoro (thorough); thorofare (thoroughfare); thru (through); thruout (throughout); catalog (catalogue); prolog (prologue); decalog (decalogue); demagog (demagogue); pedagog (pedagogue).

Editor E. R. Root offers this footnote to Mr. Thornton's article:

Personally, we (the Root Co.) approve of the changes suggested by the National Educational Association; but we do not know whether our readers would sanction it or not. For an experiment we will lay the matter before them; that is, we should like postal-card votes on the matter. All those who fail to vote, we shall assume have no preferences one way or the other, so that a majority of those who do vote either for or against may decide.

These changes are very moderate, and are not such as would shock the average reader. I have always felt, however, that to spell the word *past* for *passed*, and carry out this rule all thru was perhaps going a little too far, because it includes such a very large class of words, and really saves but little in the way of type; but when, for instance, we can omit *ugh* from the words *though*, *although*, *through*, *thoroughfare*, etc., *ue* from *catalog*, *decalog*, etc., and *me* from *program*, then we are making a step in advance, and about as big a one as would seem to us wise for us to take. We have already begun it by spelling *programme program*, *catalogue catalog*, and none of our readers have interposed or objected. Now, will they if we go one step further? I feel that we can hardly be in sympathy with the movement for shorter spelling without at least putting that sympathy into tangible form.

The spelling reformers will no doubt be glad to see this admission, as they will probably call it, that the reform is coming, and that leading publications do not want to be left too much in the rear. But if it is to be left to a popular vote, it is not at all certain that any reform will ever be made. Reforms do not come in that way. Reformers are in the minority, not in the majority. If the matter had been left to the popular vote, we probably would still be writing as many now living did in their earlier days, *Atlantick*, *Pacifick*, or as they still do in England, *honour*, *labour*, *candour*. If a vote had been taken by postal-card ballots, it is not at all certain that Gleanings in Bee-Culture would to-day be writing *program*, *catalog*. It is a case of disease. The taste of the public in the matter of spelling is vitiated and needs doctoring, and doctors do not always take a vote of their patients as to remedies.

Mr. Thornton thinks the reform should not be wholesale, but "a word or a class of words at a time." Editor Root seems to be in accord with this, providing the class be not to large, but draws the line at a class so comprehensive as that composed of a portion of the words ending in *ed*. He thinks *past* for *passed* does not save enough type, but *program* for *programme* does. If our esteemed friend will take the trouble to count, he will find that the saving is the same in each case—just two letters saved in each. But surely he cannot think that the saving of type is the chief thing. If an increase of type will more faithfully represent the sounds uttered, by all means let us have more type instead of less. Fortunately, the better spelling takes less letters. When a word is pronounced *past* there is no more sense in having two spellings for two meanings than there is in having ten spellings for the ten meanings of the word *cat*.

PROF. A. J. COOK, of Los Angeles Co., Calif., writing us Oct. 34, said:

"We are having fine rains, and all Southern California smiles."

* * * * *

MR. W. J. CRAIG is for the present acting as editor of the Canadian Bee Journal, and is doing well. Mr. Holtermann, the former editor, we presume is devoting his time to evangelistic work.

* * * * *

DR. C. C. MILLER attended the semi-annual meeting of the Chicago Bee-Keepers' Association, Thursday, Nov. 2, at the Briggs House. A good convention is always assured in advance when it is known the Doctor is to be present.

* * * * *

"MRS. HUTCHINSON has been home about six weeks. I mention this that our friends may rejoice with us." So reads an editorial paragraph in the last number of the Bee-Keepers' Review. All will be glad to learn that Mrs. Hutchinson is again able to be at home.

* * * * *

MR. F. A. SNELL, of Carroll Co., Ill., was in Chicago last week, and attended the meeting of the Chicago Bee-Keepers' Association. Mr. S. is one of the oldest bee-keepers in the State, having had bees 40 years. He now has over 80 colonies. He is also a contributor to several of the bee-papers, as well as to farm papers.

* * * * *

REV. E. T. ABBOTT was here last week to appear with us before the meeting of the sub-committee of the Western Classification Committee, as we two were appointed a committee at Philadelphia to make an effort to get certain concessions on freight rates. The full meeting of the railroad committee was to meet in Milwaukee Nov. 7. We hope to be able to announce next week the result of the effort on the part of the committee appointed in the interest of rates of bee-supplies.

* * * * *

LADY HENRY SOMESET, the noted temperance worker, of England, like many other sensible as well as titled people, believes in encouraging bee-keeping. Her ladyship, after giving particulars of the various branches of work carried on at her Industrial Farm Colony, at Reigate, goes on to say this recently in the London Daily Mail:

"We believe in work; but we believe that it should be varied, and as far as possible in the open air. Last year, in the 300-foot glass houses we grew a good crop of tomatoes. All the pruning and picking was done by the women.

"The bees, however, are really our most successful venture. They have already repaid the whole of the original outlay, and given a profit as well. This season the eight hives yielded 300 pounds of honey, and the colonies were increast by swarms from 8 to 11, so that next season we ought to gain a very good profit, if the season is favorable."

Do you want a Good Market for your Crop of Honey,

BOTH COMB AND EXTRACTED?

We are in position to handle any quantity, large or small, to better advantage than any other house, for the following reasons:

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We are acquainted with the most desirable trade thruout the country, and know exactly what their wants are.

We know, thru our long experience, the different varieties and qualities of honey; therefore know what we are selling, and no fear of selling fancy stock at the price of a third grade.

We handle by far the bulk of all the honey sent to New York, and our volume of business enables us to make the charges very reasonable.

Why, then, should we not be able to handle your crop to advantage, and do you justice in every respect?

We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

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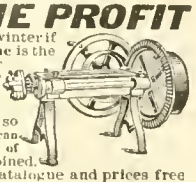

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Errors About Bees are found in books in other countries as well as this. Le Rucher Belge mentions a school-book in which the readers are told that the queen has no sting! Nature did not wish that she should be cruel, or that she should exercise a vengeance that would cost her too dear, so she gave her no weapon to use in anger!

A Bath for Wax-Worms.—Mr. L. Glasspole tried carbolic acid, chloride of lime, and camphor, in vain, to protect a number of idle combs from worms. He then packt in a large tub all the combs it would hold, put two queen-excluders on, and two flat stoues over all, then filled with water. A day later he threw out the water with an extractor, and found the worms dead. Then he dried the combs in a warm room.—British Bee Journal.

Close Spacing to Secure Worker-Comb has been strongly advocated, and A. Norton reports in Gleanings in Bee-Culture his experiments in that direction. He says:

"To make the experiment a fair one, the conditions should not be made such as to insure worker-combs, even with wider frames; so I did not keep the colony reduced to few frames at a time, as practiced by Mr. Doolittle when getting worker-comb built; but I gave them all at one time to the colony, and then left matters to take their own course. The frames were clampt tightly together with thumbscrews, so there was no possibility of there being more than 1¼ inches from center to center. The bees were half-blood Carniolan and golden Italian. From the worker-cell starters in part

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Root's Column

THE

ABC of Bee-Culture

Revised in 1899.

Just from the Press.

See what W. Z. Hutchinson, editor of the Bee-Keepers' Review, says:

ABC of Bee-Culture.

If there is any book on bee-keeping of which bee-keepers have reason to be proud, it is Root's ABC of Bee-Culture. I am reminded of this by the receipt of a copy of the latest edition, which is just out. There is probably no firm in the whole wide world possessing the facilities and advantages of The A. I. Root Co. for getting out a work of this kind. It has plenty of capital and a thoroly equipt printing-office. More than this, there is an experience of more than ¼ of a century in actual, practical bee-keeping. More than any one else, an editor has an opportunity for being fully informed regarding the actual state of the industry which his journal represents. Thousands of letters from all parts of the country pass under his eyes each year. In order that the best possible advantage might be taken of the knowledge thus secured, The Root Co. have been to the expense of keeping the book standing in type. As often as new discoveries or changes are made, a corresponding change is made in the subject matter of the ABC. By this method the last issue of the book is up to date. It cannot be otherwise than that the edition just out is decidedly the superior of any previous editions. I might go into details, but the advertisement on the back cover of the Review has saved me that trouble. I can as thoroly endorse that advertisement as tho I had written it myself as an editorial notice. When a beginner writes and asks me what book he better buy, I unhesitatingly tell him, "Root's A B C of Bee-Culture,"—and I have a book of my own to sell.

W. Z. HUTCHINSON,
Editor Bee-Keepers' Review.

The A B C of Bee-Culture can be had of any of the leading booksellers, or the publishers of many agricultural and horticultural journals; also of any bee-journal publisher or dealer in bee-keepers' supplies. If more convenient send your order direct to us. Price, $1.20 postpaid, or this book with Gleanings in Bee-Culture one year for $1.75, postpaid.

The A. I. Root Co., Medina, O.

of the frames they built about half or more than half of drone-cells. From one such starter they built a solid sheet of drone-comb, filling the frame. From about half the starters they built nice worker-comb, but in two such combs I found large quantities of drone-brood in worker-cells, tho the queen was a vigorous one, as shown by her record before, and also since upon being shaken with the bees into a hive with all worker-comb. Hence I conclude that 1¼-inch spacing is not to be depended upon to insure all worker-comb."

Keeping Track of the Stock.—Dr. Miller recommends in Gleanings in Bee-Culture the practice of marking in pencil on one of the sections of a super when taking it off, the number of the colony from which it was taken. "Then when you find a super of greasy-looking sections you know where to replace a queen next spring." He might have added that when you find a super of extra-white sections, you will know next year where to find a queen as a breeder, if she is all right otherwise. The editor thinks this a good point in favor of numbering hives.

Selection in Breeding is a thing that is in the hands not only of the skillful breeder, but to a large extent also in the hands of the average bee-keeper with half a dozen colonies. If he encourages breeding from colonies that show best results with fewest faults, improvement will follow. A writer in Le Rucher Belge says: "If the common race had been maintained in its purity by a severe selection, there would have been no need to import bees of foreign races." And yet, if the foreign race is better, its introduction might be a good thing.

Moths in Hives.—In the British Bee Journal, L. Glasspole says he has had great trouble with moths, adding, "A strong colony of bees can generally take care of their own combs, but they will only take care of the combs they cover, and one superfluous comb will sometimes prove a veritable nursery for the pest." This may sound a little strange to many American bee-keepers, who find a strong colony not only able to protect all the combs it covers, but twice as many idle combs besides. Quite likely the difference is in the bees, black bees being preferred in England, while Italians lead here.

Keeping Bees in Clamps has not been much spoken of lately, altho Dr. L. C. Whiting and O. J. Hetherington have practiced it for years successfully. Editor Hutchinson has lately visited Mr. Hetherington, and gives in the Bee-Keepers' Review two views of his clamps. The clamps hold 7 or 8 colonies each, having two feet of length for each hive, three feet wide, four feet high in front, and three feet high at back. Planer-shavings are used for packing. The packing is left till time to put on sections, and the hives are left in clamp all the year round. The bees are well shaded, lie out very little in hot weather, and are not driven out of the supers in cool nights; but the hives are not handled so conveniently as when sitting singly in the yard, and more queens are lost.

Celluloid Bee-Veil.—The reason why I was led to the study of bee-veils was that the ordinary fine silk net that is used in ordinary bee-veils is so fragile that it breaks open in spots and allows the bees to enter. I have purchast such netting at stores that was, I was going to say, rotten, and I guess that is about as good a term as any to express the quality. A bee-keeper in almost any country is liable to get his head against a bush or a limb of a tree, and every bee-keeper knows how handily a twig will catch into a veil and rend it. Then, a silk veil is worth from 50 to 75 cents, and is of such value that it ought to last longer. The veil I present has an old material for the back, and a new material for the front—at least I have never heard of its being used for this purpose. It is very thin, very

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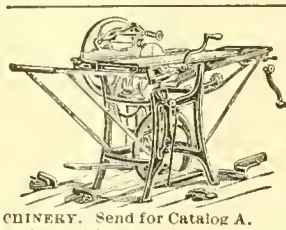

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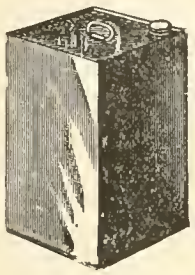

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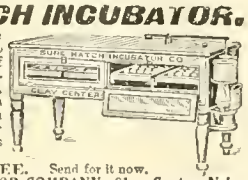

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transparent celluloid—as transparent as glass; very light, and quite flexible; and a large piece of it that will enable the wearer to see in every direction costs about 8 cents. The celluloid is attacht to common white mosquito-netting. The total cost of material for the veil is about 12 cents; and when the bachelor bee-keeper has plenty of leisure the making of it becomes a pleasure. When I first donned the thing I thought I should not like it; but now after a few weeks' use I am more and more in love with it. There is but little reflection from the bright surface into the eyes, and the reflection bothers only when the sun is not shining. The mosquito-netting, besides being cheap, is of large mesh, and allows a free circulation of air. The color also adds to the comfort.—Rambler, in Gleanings in Bee Culture.

Getting Bees to Clean Out Unfinisht Sections is thus discust in a Stray Straw in Gleanings in Bee-Culture:

"'You can take partly filled sections and place them in the upper story of a colony; and the bees below, if you give them time enough, will empty them out and store in the brood-combs' (Gleanings, 724) For this 'locality' that phrase, 'if you give them time enough,' should be strongly italicized, making the time generally not less than six months. I've had heaps and heaps of experience on that point, with large numbers of supers, extending over years, with all sorts of insinuating devices, and I must humbly confess that I think I never got a single super cleaned out when allowing only one colony access to it. If any one has succeeded, I'll be effusively thankful for the trick."

Editor Root adds this footnote to the above paragraph: "We have had bees empty out partly-filled sections in the upper story; but it sometimes took two months, and that is the reason why I put in the qualifying clause, 'if you give them time enough.' Taking it all in all, the bee-keeper had better not fool away his time and that of the colony in any such way as this; better—far better—pile the sections up in the cellar and let all the bees rob them out slowly."

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would be an improvement on the old way, but WE can't do it. We CAN furnish an **INCUBATOR that will hatch** all hatchable eggs, and do it with less attention than any machine made. It does it because it is made right and has all late improvements. Sold at a low price and guaranteed. Catalogue in 5 languages, 6 cts.

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Sweet Clover (white)	60c	$1.00	$2.25	$4.00
White Clover	80c	1.40	3.00	5.00
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GENERAL ITEMS

Grateful for a Small Yield.

I cannot report a very large yield for the past year—about 2 000 pounds from 50 colonies. Still I am very grateful for that, as many in this vicinity have not enough honey to spread on their cakes a half a dozen mornings. G. H. LINCOLN.

Clark Co., Wis., Oct. 28.

Results of the Past Season.

I started last spring with 4 colonies two of which swarmed once, one swarmed twice, and one did not swarm at all. The one that did not swarm gave me 54 pounds of nice white honey, which I sold for 20 cents per pound; the other 3 old colonies gave no surplus except one gave 8 pounds; 2 of this year's swarms gave me 51 pounds surplus, so in all I got 113 pounds of surplus honey. The reason I sold some of this honey is because I am aiming to make the bees pay their own expenses, for hives, etc., so that if I happen to lose them it will be no financial loss.

This is my second year, and I am well satisfied so far. I have not heard of any one near here that got any surplus this year. I now have 10 colonies in good condition for winter. LEWIS LAMKIN.

Woodbury Co., Iowa, Oct. 24.

Bees Did But Little.

Bees have done but little here this season on account of the weather. I was noticing to-day that the clover on the roadside has started more than I thought it had, making the prospects for a clover flow next year very good. After a poor season following a severe winter bees haven't made much of a stir this season. E. B. TYRRELL.

Genesee Co., Mich., Oct. 28.

Not a Good Place for Bees.

I don't believe this locality will be a successful bee-country. My bees seemed to do well in the early part of the season. I had 3 new swarms from 4 colonies; one colony cast 2 swarms, all early and strong ones. They did well until about the middle of July, then they killed off all drones, and to-day they have considerable honey. They built large, handsome combs, but did not get to fill them with honey. I may have to feed a little, but this may not be in any fault of the country. I believe where white clover exists it would be much more favorable for success. I imagine Missouri is a more successful State for bees. I have an acquaintance in Boone County, and he says they have a good crop of honey this year. They have plenty of white clover and buckwheat.

I am going to change my business to farming, with bees, chickens and fruit. I want to locate in a good place for bees. Oklahoma is the best place for fruit I have ever seen. The winters are mild. Bees can be left out all winter on the summer stands. G. W. MAUK.

Oklahoma Co., O. T., Oct. 23.

Honey Crop Poor.

The honey crop was very poor here the past season. I got 300 pounds of comb honey from 28 colonies, spring count, and increast to 56. Last year I had 700 pounds of comb honey from 11 colonies, spring count, and increast to 30. I lost two in the winter. Late swarms will have to be fed for winter. JOSEPH BETHKE.

Sauk Co., Wis., Oct. 24.

Very Poor Honey Crop.

The honey crop was a very poor one with me this year—an average of 10 pounds to the colony, spring count, and I will have to feed some for winter. It was caused by bad management, and the freeze last February. I find it as important to flowers as to the bees, if you wish to make a success. I have experimented with several kinds of bees, and I find them similar to the human race—the dark or hybrids prove to be the best workers in the heat. An Italian queen fertilized by a native drone is my preference. I have two colonies of Adels, and they hold up well to three out of four of their recommendations—breeding, gentleness and non swarming—but for honey "no good," or they have proven so with me. I will give them one more trial, and, if they fail, off comes the queens' heads.

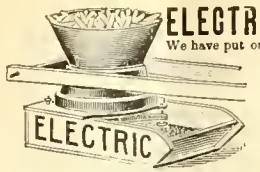
L. W. MCRAE.

Washington Co., Ala., Oct. 25.

Tiering Hives in the Cellar—Report.

I notice some inquiry lately about the manner of tiering hives in the cellar. The "Sage of Marengo" doesn't seem to have "caught on" yet to the best way to tier hives without bottoms. His objections to Pennsylvania's shelves (see page 662) all hold good in regard to the way he says to tier them.

Just pile them up the same as the Doctor does, and if you have a common bottom-



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The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

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J. A. VAN DEUSEN,

Sole Manufacturer,

Sprout Brook, Montgomery Co., N.Y.

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The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

W. M. BARNUM, Publisher,

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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Box, filler and directions with each pen. Every pen guaranteed for one year, by the manufacturers.

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To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

We are offering our readers an absolutely perfect fountain pen which is guaranteed to give entire satisfaction, as the Diamond Point Pen Co. fully warrant and guarantee them absolutely as represented.

If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

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No. 2110.—Price, $1.50, postpaid.

$5.00 FOR A GOOD FEED COOKER

RELIABLE FEED COOKERS

represent unequaled value in this class of live stock appliances. Best cast iron furnace with large heating surface. Boilers made of best No. 22 galvanized steel—**can't rust, tarnish or poison and discolor food.** 20 gal. size $5. 50 gal. size $12. and 100 gal. size $16. The small size burns wood only; the larger sizes burn both wood or coal. Don't buy until you get our free circulars.

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The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

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Best.... Basswood **Extracted Honey ...**

IN BARRELS.

WE have some very fine WISCONSIN BASSWOOD EXTRACTED HONEY in barrels, each holding 360 pounds of honey, which we offer at **9 cents a pound**, f.o.b Chicago, cash with order. Sample by mail, 10 cents. We can ship promptly. Address,

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CAN FURNISH YOU WITH THE VERY FINEST

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Parties wanting goods before new catalog is issued will please write for quotations. We want every **BEE-KEEPER** on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

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Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

23 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **23** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

board, put 1½ or 2-inch strips under each end to raise it that much from the hive below. To get them off the bottom you must pry them up a little (¾ inch or so) a day or two before cellaring, and take a pretty cool day to carry them in. Have your cellar as dark as you can see to work in, and handle them extra carefully.

My report for the past season is, 40 colonies, spring count, 1,800 pounds comb honey, 100 pounds of extracted, and increast to 65 colonies; which shows a rather poor year, but we have just had a splendid rain and are expecting a "big crop" next year. E. S. MILES.

Crawford Co., Iowa, Oct. 27.

No Surplus Honey.

I started one year ago with 35 colonies and now have 110, and the past has been a dry season—no surplus from even the best apiaries in this neighborhood.

W. A. JOHNSON.

Los Angeles Co., Calif., Oct. 20.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

Colorado.—That "irrepressible" Colorado State Bee Keepers' Association will hold their annual convention Nov. 27, 28 and 29, in the State House, Denver, beginning at 10 a.m. As usual, the State Agricultural College will assist us. Every one should come loaded with ideas and subjects for discussion; those who cannot come should write soon to the secretary or the president and tell us what are the particular needs of your locality. The members will be the program—we know from experience that you will make a very lively convention. Come everybody—there is sure to be "a hot time in the old town." R. C. AIKIN, Pres.,
F. RAUCHFUSS, Sec., Loveland, Colo.
box 378, Denver, Colo.

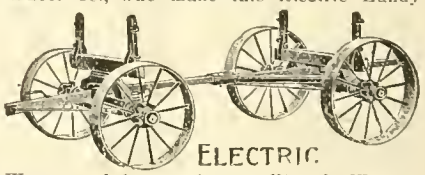
Better Farm Poultry.

Intelligent interest in fine poultry is becoming more general from year to year. Evidence of this is the markt improvement of the Poultry Press and the attention paid to the subject by the more general farm papers.

No small credit for this is due to the breeders of poultry who have for years advertised their stock, maintained exhibits and contributed in many ways to arousing and stimulating the attention of the public at large. One of the names familiar to readers of the American Bee Journal is John Bauscher, Jr., of Freeport, Ill., whose card appears in another column. Mr. Bauscher has an immense establishment and makes a specialty of Farm-Bred Stock. He publishes a very complete and expensively prepared manual at a merely nominal price and solicits correspondence. Intending purchasers will do well to write him before buying, always mentioning the American Bee Journal when writing.

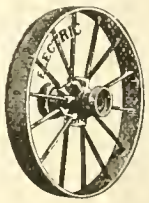
Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric Wheel Co., who make this Electric Handy



ELECTRIC

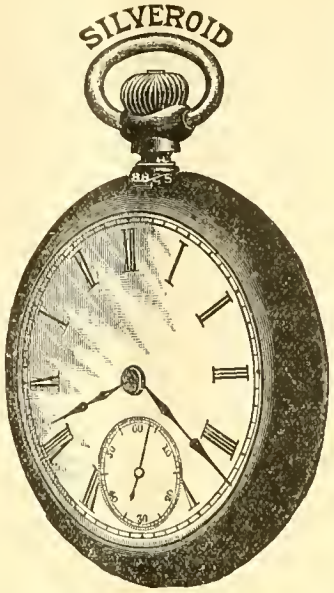
Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.



This wagon is composed of the best material thruout—white hickory axles, steel wheels, steel hounds, etc.; guaranteed to carry 4,000 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired, and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low-down wagon at will. Write for catalog of the full "Electric Line" to Electric Wheel Co., Box 16, Quincy, Ill. Mention the Bee Journal.

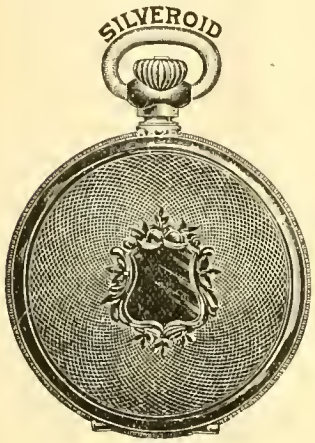
You Should "Watch" Yourself.....

Lest You get "Behind Time."



146

THE WATCHES we offer here are genuine bargains, and if you have none you will not make a mistake if you get one of these. They are equal to any $15.00 or $20.00 watches as time-keepers.



143

No. 146 is a Gentleman's genuine open face Elgin, Waltham, or Hampden, the movement nickel-finisht, compensation balance, straight line escapement, quick train, patent safety pinion, double brace main-spring, Breguet hair-spring. The Case is Silverine with screw front and back, and of good weight, thus making a perfect, dust-proof watch.

No. 143 is a Lady's genuine Elgin, Waltham or Hampden, the movement nickel finisht, 7 jewels, compensation balance, Breguet hair-spring, with Silverine hunting-case.

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No. 146 we will send prepaid, by express, to any address for $6.00; or will give it free as a premium for sending us 12 new subscribers for the American Bee Journal for one year at $1.00 each; or we will club it with the Bee Journal for one year—both for only $6.50.

No. 143 we will send prepaid, by express, to any address for $7.00; or we will give it free as a premium for sending us 15 new subscribers for the American Bee Journal for one year at $1.00 each; or we will club it with the Bee Journal for one year—both for only $7.50.

We believe we have never offered any premiums to our readers that we think will give the satisfaction that these watches will. They are not cheap "clocks," but really valuable watches that will wear well, run all right, and be worth much more than is paid for them. Here is a chance to make a gift to some boy, girl, young man or young lady. Everybody ought to have a good watch. Address,

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

BEE-SUPPLIES Root's Goods. Root's Prices.

LANGSTROTH HIVES, MUTH'S HONEY-EXTRACTORS, ETC.

Muth's Square Glass Honey-Jars are just the thing you want NOW to develop your home market for your extracted honey.

WE carry a complete line of Root's goods and sell at their prices. TO PARTIES IN THE SOUTH we offer a saving in freight. Send us your orders and be convinced. Catalog for the asking.

C. H. W. WEBER,
Successor to
CHAS. F. MUTH & SON and A. MUTH,
2146-48 Central Ave., CINCINNATI, O.

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Please mention Bee Journal when writing.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Oct. 18.—The market is active and full quotations are obtained. A little fancy white sold at 10c, but sales are chiefly at 15c for the best grade; white, not strictly fancy, brings 13, 14 and 15c; amber grades range from 10@12c, and dark, 9@10c. Extracted, 7@8c for white, according to body, flavor and package; amber, 7@7½c; dark grades, 6@7c. Beeswax, 26@27c.
R. A. BURNETT & Co.

KANSAS CITY, Oct. 19.—The demand for comb honey is fair, and supply light. The supply of extracted is light, and demand good. We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13½c; No. 2, 12½@13c. Extracted, white, 7@7½c; amber, 6@6½; dark, 5@5½c. Beeswax, 22@25c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:
Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CINCINNATI, Oct. 9.—The demand for honey, both comb and extracted, is very good, with prices much better than a few weeks ago.
Fancy comb finds ready sale at 15@16c; darker grades are hard to sell at any price.
Good demand for all grades of extracted. White clover and basswood brings 8@8½c; amber and Southern at from 6@7c. Good demand for beeswax at 26c. C. H. W. WEBER,
Successor to Chas. F. Muth & Son and A. Muth.
We do not handle honey on commission—we buy for spot cash only.

BUFFALO, Oct. 20.—Supplies of strictly fancy 1-pound combs are lightest for many seasons; such are held firmly at 14c; few sales, 15c: No. 2, from 12c down. We do not notice any extracted in market. It is wanted at from 5c to 7c per pound. Beeswax, from 28@30c per pound for fancy pure yellow. BATTERSON & Co.

SAN FRANCISCO, Oct. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7¼@7¾, light amber, 6½@7c, amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Oct. 13.—We quote: Fancy No. 1 white in cartons, 15@16c; A No. 1, 14@15c; No. 1, 13@14c. Extracted, light amber, 7@8c; amber, 6½@7½c.
But little new to note in this market on honey. The supply still continues to be very short while the demand is naturally a little lighter, as the retail trade is not quite up to higher prices, still with the light stock they must evidently come to it. BLAKE, SCOTT & LEE.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices. White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12@13c; No. 1 amber, 11@12c; fancy dark, 9@10c; White extracted, 8@8½c; amber, 7@7½c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Fancy white comb honey in no-drip shipping-cases. State price, kind and quantity. C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth
40Atf 2146-8 Central Ave., Cincinnati, O

Wanted! Your HONEY
We will buy it, no matter where you are. Address, giving description and price,
34Atf THOS. C. STANLEY & SON, Fairfield Ill.

Latest Improvements. Perfect Goods.
Very Reasonable Prices.

Hives, Shipping-Cases Sections, Extractors, Etc.

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THE W. T. FALCONER MFG. CO.,
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The American Bee-Keeper is a live Monthly, and has been publisht by us for the past 10 years—50 cents a year.

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Here is the Thing you were looking for the last winter

The New Champion WINTER-CASE...

which does away with all unnecessary work, and in which the bees will not die in the coldest winter. Send for special prices on quantity wanted. R. H. SCHMIDT & CO., SHEBOYGAN, WIS.

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BEES **QUEENS**
Smokers, Sections, Comb Foundation
And all Apiarian Supplies cheap. Send for FREE Catalogue. E. T. FLANAGAN, Belleville, Ill.

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M. H. HUNT & SON,
SELL ROOT'S GOODS AT ROOT'S PRICES. Shipping-Cases and Danz. Cartons are what you need to display and ship your honey in. Send for Catalog. BELL BRANCH, MICH.

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Bingham's Smoker...

A Little Better than
"Perfect."

Address,
T. F. BINGHAM,
Farwell, Mich.,

For Circular, giving full information and prices.

Please mention Bee Journal when writing Advertisers.

22nd Year **Dadant's Foundation.** 22nd Year

Why does it sell so well?
Because it has always given better satisfaction than any other.
Because in 22 years there have not been any complaints, but thousands of compliments.

We guarantee satisfaction.
What more can anybody do? BEAUTY, PURITY, FIRMNESS, No SAGGING, No LOSS.
PATENT WEED PROCESS SHEETING.

Send name for our Catalog, Samples of Foundation and Veil Material. We sell the best Veils, cotton or silk.

BEE-KEEPERS' SUPPLIES OF ALL KINDS.

Langstroth on the Honey-Bee, Revised.

The Classic in Bee-Culture—Price, $1.25, by Mail.

Beeswax Wanted at all times. CHAS. DADANT & SON,
Hamilton, Hancock Co., Ill.

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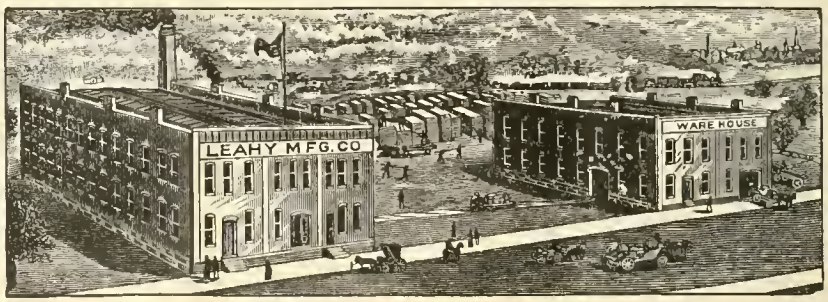

For Apiarian Supplies —Address— LEAHY MFG. CO. HIGGINSVILLE, MISSOURI.

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Farmer's Home Journal, Louisville, Ky.

A practical business paper for the farmer. It treats of farming and stock breeding from both practical and scientific standpoints. It is the oldsst and best known agricultural weekly in the South. If you have anything to sell send us your advertisement. Every farmer who expects to mix "brains with muscle" in his business should read this paper. Subscription price, $1.00 per year. Sample copy free. Address, FARMER'S HOME JOURNAL, Louisville, Ky.

Please mention Bee Journal when writing.

HONEY-JARS.

1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

OUTSIDE CASES

for wintering bees, include bottom, body and gable cover—60 cents each, 10 for $5.50.

BASSWOOD EXTRACTED HONEY, cans and kegs, 8½ to 9c per pound. Sample 5 cents.
Catalog free. I. J. STRINGHAM,

Please mention Bee Journal when writing. 105 Park Place, NEW YORK, N. Y.

Please Mention the Bee Journal when writing Advertisers.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., NOVEMBER 16, 1899. No. 46.

BIOGRAPHICAL.

G. W. Bell, His Boys and Bees.

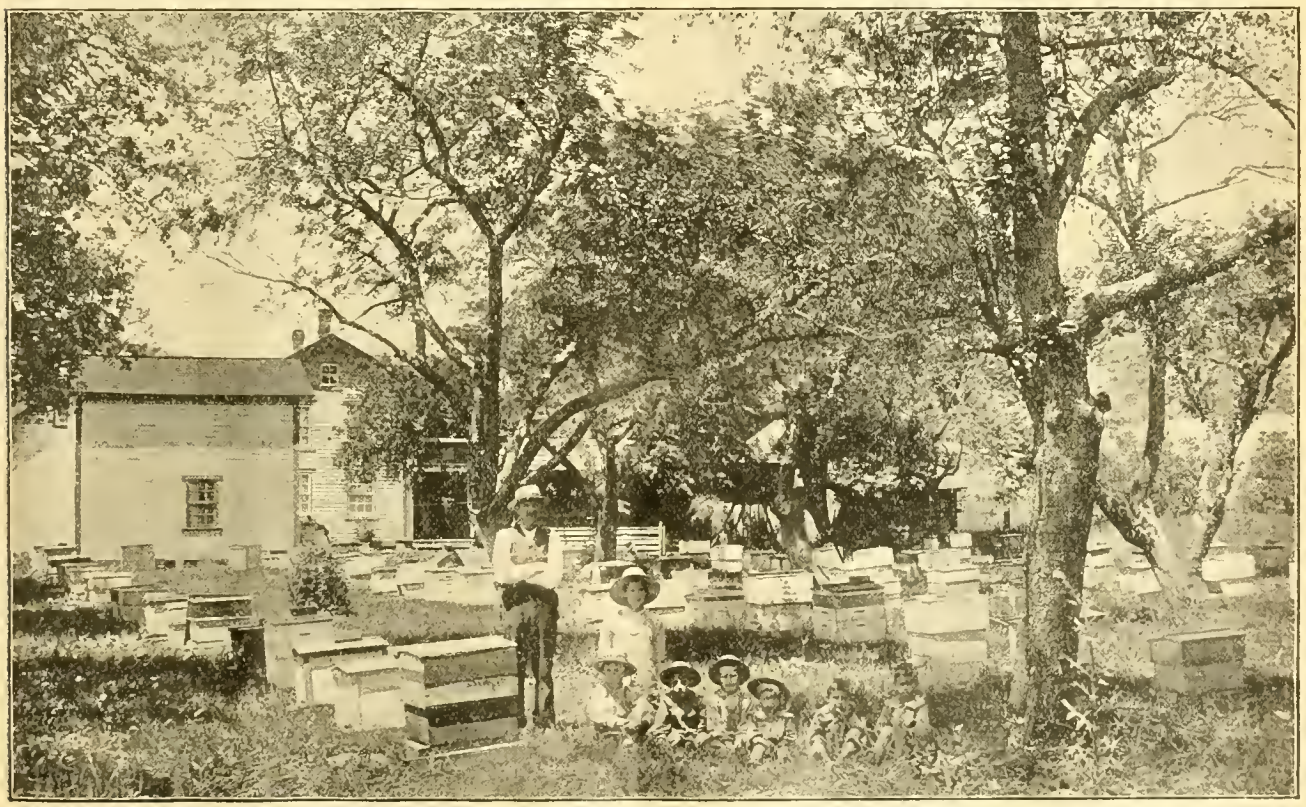
MR. BELL was born in Pennsylvania March 12, 1860. His father was a farmer and lumberman, so "G. W." workt on the farm in summer and lumbered in the spring, going to school in winter. He taught two terms of school, and in the spring of 1883 he entered the mercantile business, in which he continued until last fall.

The spring of 1884 he married Miss Mamie Newcomer, and their family now consists of the seven boys shown in the picture. When all of those little "Bells" get to "ringing" what a time they must have in that home!

Mr. Bell was appointed postmaster at his place in Clearfield County in 1883. He was instrumental in having the post-office establisht, and held the position for nine years. During that time he was twice elected justice of the peace, has been tax-collector four years, school director, and auditor—in fact, he has been in office since 1884, and came within 24 votes of being elected to the State Legislature. Mr. Bell doesn't look like a politician, either. We have had the pleasure of meeting him at several conventions, the last time at Philadelphia, in September last.

He commenced to keep bees in 1888, getting two colonies, and has been very successful, considering that his locality is not overcrowded with good nectar-yielding plants. Still, he has succeeded in getting more honey per colony than any of his neighbors. He has Italian bees, and tries to keep them pure, introducing new queens every season. The past season he increast his apiary from 59 colonies to 98, and took 2,700 pounds of honey.

Mr. Bell and his boys had just come in from the corn-



Mr. G. W. Bell, of Clearfield Co., Pa., and His Yard of Bees and Boys.

field when the photographer happened along, and as the latter was in a hurry, they all went into the apiary just as they were. The two boys at the right are twins, 5 years old; the next one is the youngest, 3½ years; the next, the fourth, 10 years old; next, the fifth, 8 years old; next, the sixth, 12 years old; and the one on his knees is the oldest, being 15 years of age. Mr. Bell informs us that none of his boys are afraid of the bees. Should he be able to make bee-keepers of all those boys, what a large number of out-apiaries they could manage. In case they should ever decide to do this, they would need to go West to the large alfalfa regions where there is plenty of room for both boys and bees. THE EDITOR.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 709.]

After the general discussion Hon. EugeneSecor read the following paper on

Fads, Fancies and Follies in the Apicultural World.

YANKEE GENIUS.

A live Yankee's an experimenter,
As most of you here understand;
He has breathed the pure ozone of freedom
So long in this limitless land,
And been wooed by the goddess Invention
Till every old method is scanned.
What appliance, machine, apparatus,
Or anything heretofore planned,
Is quite perfect till the light of his genius
Shines thru the "American brand?"
The Dead Sea of unworkt opportunity
Recedes when he raises his hand!

INSPIRED.

Not content with the ways of his father,
Believing himself the grantee
Of the brains of the last generation,
The pride of the family tree,
He is anxious to show his kinsmen—
And all the good folks yet to be—
The paved highway to fame and to fortune,
Which others, before, failed to see.

THE PROOF.

Hence the shelves of the Government office,
Where models of patents are kept,
Are the wonder of every beholder
That into the building has stept;
They convince the observant on-looker
That Yankee inventors ne'er slept.

PATENTS ON YOUTH.

They have patented every idea,
Yes, every conceivable thing,
From a mammoth steam thresher and stacker
To the tiniest baby-swing;
And I'm waiting, impatient, for patents
On *Youth* and perpetual *Spring*—
For these thin, wintry locks are embarrassing
When bees 'round my cranium sing;
And we're loth to resign the ambitions
Which flowery young manhood did bring.

IN PARENTHESES.

By the way, this proud eagle of Freedom
Has not been confined in its flight
To *inventional* vauntings and soarings
To lead this old world to the light.
He once crackt an old bell in this city
Proclaiming the reign of the right;
And from that trying time to the present
Old Glory's been always in sight;
And the eagle still screams 'bove the rattle
Of musketry, "Fight for God! fight!"

AN APOLOGY.

But as this is a bee-men's convention,
Not held on the Fourth of July,
And as my subject is better adapted
To blowing your follies sky-high,
Than to waving the national banner,
I return to my task—and sigh—
For I'm thinking you'd rather hear something
Of new things—of something to try,
In the place of reviewing old skeletons
From wrecks of the days going by—
And it's pleasanter to feed you with taffy
Than to witness your faces awry—
But the example of George the Immortal
Points straight to the truth—that's why
I am giving you doses of tansy
Instead of all candy and pie.

BEE-KEEPERS EXCEL.

Now, if Yankees in general are smart enough
To give us so much that is new,
Pray, what might be expected from bee-men—
The cream of the whole blessed crew?
There is something so strangely bewitching
About the bee-business that few
Can resist the temptation, when in it,
To show the great things *they* can do;
For the novice behind a bee-smoker
Is burning with "try," thru and thru.
"There is room at the top"—thus he muses—
"And *I'll* give the world *more'n* a cue
In the art of improving the fixtures
And methods in use hitherto."
And until he has hatcht a new theory
He heeds not the warning curfew—
But just wait! here's a child of his genius,
Laboriously born, take a view:

THE SELF-HIVER.

The contrivance is called a Self-Hiver;
Its object exceedingly plain;
T'is intended to fool Mrs. Queenly
And all her worshiping train.
Some fine morning they plan for a frolic—
And nothing their zeal can restrain—
But our genius, without pressing a button,
Stands by and repeats this refrain:
"Now I've got 'em, I've got 'em, I've got 'em,
I'm sure they will bring me much gain!"
But just how they enricht his exchecquer
I've waited for answer, in vain.
(Would you get the most eggs from a turkey?
Just humor her whims, in the main.)

THE NON-SWARMER.

There's another ingenious invention,
First cousin to that just described—
With an itching to try something novel
How easy is error imbibed!
A non-swarmer is lovely in theory,
But over its grave is inscribed:
"Here lies one that was born in a hurry,
And died without clergy—proscribed."

REVERSIBLE HIVES.

Please reverse the old dial of your memory
Some half a score years, more or less;
Does the hive with that recently wonderful
Reversible feature impress
The bee-keeper of *this* day as useful
And needful to compass success?
Does the man that gets honey now use it?
Don't all in a chorus say yes!
The reversible function is obsolete,
If this one's permitted to guess.

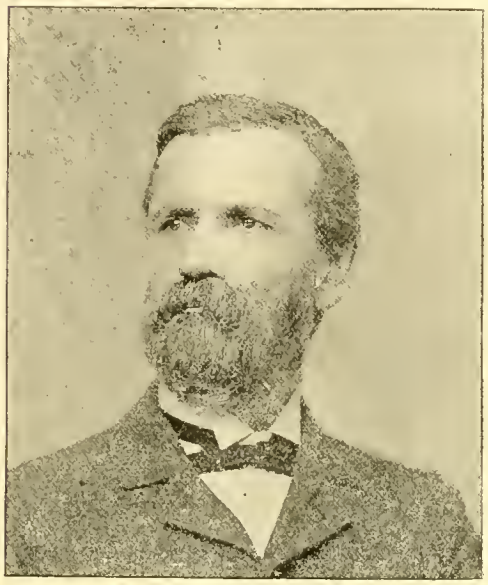
MOTH-PROOF HIVES.

Hid away in some store-room or garret,
Mayhap, when not looking, you'll find
A reminder of times when some peddler
Grew fat till his face fairly shined,
As he traveled from farmstead to farmstead
Unloading his hive—and his mind

With a silvery tongue which for smoothness
Beat lightning and tallow combined.
Simple farmers who knew none but box-hives
Were ripe for a deal of his kind.
Clever agents for moth-killing patents
Were welcomed and cidered and dined
In the coveted days of the by gones
When wax-worms—and others—were blind.
Now, perhaps all such folly is ancient,
But hist'ry is always behind.

THE BUREAU HIVE.

In the dimness of past recollections
I see such a beautiful hive,
The deft work of a cabinet-maker,
No doubt—he alone could contrive
Such a lot of nice drawers and compartments,
In which the bee-farmer could dive
For the sweets of the fragrant white clover
When company staid after five.
But the plaguey old bees are so stupid



Hon. Eugene Secor.

They chink all the cracks, and deprive
That poor granger of all reputation
For piety—while he's alive;—
For if anything sticks like propolis,
Old habits will stick and will drive
Till the last mortal grip of our nature
Lets go—like the drawers in that hive.

APIS DORSATA.

There is something within us that's longing
For what is unknown and unseen,
And we hope for a prosperous future
No matter what yesterday's been.
Don't the things which elude our endeavors
Appear most alluring in sheen?
'Tis the grass just outside of the pasture
That's greener and sweeter, I ween.
Just at present we're gazing toward sunrise,
Where Apis dorsata is queen,
And so great is our love for the latter
The golden Italian looks mean.
We are bound to have her of the Orient,
Tho Dewey's whole fleet lies between,
And we have to confine her, when gotten,
With tether, or Page's wire-screen.
There will be no more use for old Bombus!
Red clover'll be suckt slick and clean
By that wonderful Apis dorsata—
Get ready your honey-machine—
Since the failure of bees that are stingless
We'll never again be so green!
Give away your old, poky Italians
And court the young Miss Philippine!

DEEP-CELL FOUNDATION.

In this era of ready-made clothing
For both men and women, I trow
'Tis not funny that ready-made jackets
For young baby bees are the "go;"
To expect the young nurses to make them
In this day and age is too slow.
Hence a recent fad out is foundation
With cells so deep bees do not know
The first principle of starting in business—
The joy of beholding things grow.
That old saw about having our pitchers out
To catch the first nectarine flow
Needs revising when combs made to order
Shall fill every hive in the row.
Mrs. Bee may yet lose her employment
If matters keep going on so;
For, but one further step is now needed
To save her the trips to and fro—
From the hive to the orchard and pasture
Where blossoms so temptingly blow.
When the next budding genius shall enter
The domain of Beedom and throw
In our laps a machine that's a *capper*,
The cake of the bee-man is dough.

THE CRITICS.

The departments for critics appearing
In journals devoted to bees,
Is an idea that *some* of us writers
Don't relish as we do green peas;
For it frightens us out of our senses,
And makes us feel weak in the knees.
The *great need of bee-keepers is grammar!*
They need it at least if they'd please
The dear critics, for *they* admit Miller
By only the narrowest squeeze—
And if *we* should misplace a capital,
Or fail, just once, to cross our t's,
We should look for the sting of the critics,
Who feast on such fool things as these.
I have found that it's easier than preaching,
To pick up the parson, when he's
Got more sermons, and better, in his noddle
Than all of his critic trustees.
But it seems as tho *style's* more important
Than *facts*, with some people one sees,
So I give you this timid injunction:
When critics take snuff, *let all sneeze.*

CONCLUSION.

But I tire you with multiplied mention
Of follies and fads new and old;
There are others which might be included,
Requiring a volume to hold.
I might speak of more *present*-day theories
The worth of which time will unfold,
But I hate to bury a baby
Before it is thoroly cold;
And, besides, if I happen to miss it
My own knell will likely be "knolled;"
So I leave this rich subject for future
Embalming by spirits more bold.

EUGENE SECOR.

Dr. Miller—In this discussion I move that the speakers be limited to 15 minutes. (Laughter.)

Mr. Abbott—I think this paper should not be past by without discussion, and it reminds me of a man who had not time to pray, so he had a parson write a prayer, and then he would point to it and say, "O Lord, them's my sentiments."

At this point a recess of 10 minutes was taken, after which it was voted to proceed with

THE ELECTION OF OFFICERS.

Dr. Mason—I suggest that we vote for president, vice-president and secretary at the same time, and on one ballot.

The suggestion was agreed to.

Dr. Mason—I nominate Ernest R. Root, of Ohio, for president; and L. D. Stilson, of Nebraska, for secretary.

W. Z. Hutchinson was also nominated for president, and G. M. Doolittle for vice-president.

On motion it was voted that the secretary be instructed to cast the ballot of the convention for Mr. Doolittle for vice-president, which the secretary did.

Mr. Stone and Mr. Hershiser were appointed as tellers.

Mr. Abbott—I don't believe in trading off a horse that has been tested and found faithful, so I nominate Dr. Mason for secretary.

The ballot resulted in the choice of E. R. Root for president, and Dr. A. B. Mason for secretary.

COMMITTEES ON HONEY, FREIGHT RATES, AND THE APIARIAN EXHIBIT AT THE PAN-AMERICAN EXPOSITION.

Pres. Whitcomb—I have been requested to appoint a committee of three to pass on the honey that is on exhibition, and I will appoint Messrs. Hutchinson, Selser and Doolittle as such committee.

Mr. Abbott—I would like to have a committee on freight rates on bee-keepers' supplies appointed by this convention. There is in the West a class of bee-smokers that have always been shipt as first-class. Just before I came away I shipt smokers, and the freight was high. There is no reason why bee-men should pay first-class for tinware. I would like to have the question brought up. I am going before the classification committee when I go back, and I would like to have the influence of the Association. I have always shipt hives nested, and I suppose I have saved bee-keepers a good many dollars. That is a matter that I think the Association ought to take up before the Western Classification Committee. I have been looking the matter up, and it seems to me that it can be properly presented. The Western Classification Committee has raised the classification so that there is 8½ cents put upon the consumer. Now the consumer is interested. I am not selfish about this, but I would like to see something done in the matter.

Mr. Root—I would like to amend that matter, and have Mr. Abbott appointed as a committee of one. He knows all about the matter, and if he has the influence of the Association, he can do a great deal.

Mr. Abbott and Mr. York were appointed as such committee.

Mr. Danzenbaker—Mr. Abbott speaks about hives being nested. Take a 10-frame hive that has a super and you can put in another hive, and turn the body of the super and you can get in another hive. It takes no more room, and the bodies are nested into each other. I advise people to do this and save 50 percent on freight.

A letter from the Pan-American Exposition, to be held in Buffalo, N. Y., in 1901, was read, requesting the Association to appoint a committee of three which shall be advisory to the committee there, who shall have in charge the apiarian exhibit. After some discussion, on motion of Dr. Mason, the president was instructed to appoint a committee of five. Messrs. E. R. Root, of Ohio, W. F. Marks, of New York, George W. York, of Illinois, W. A. Selser, of Pennsylvania, and O. L. Hershiser, of New York, were appointed as such committee.

SECOND DAY—EVENING SESSION.

The evening session was called to order by Pres. Whitcomb, and was opened with a song, "The Hum of the Bees in the Apple-Tree Bloom," sung by Dr. Miller, after which came a paper by W. A. Selser, entitled,

The Products of the Honey-Bee—Wax, Propolis and Honey.

When your worthy secretary wrote asking me to read a paper I replied that I would, and he could select any subject that he desired. He said he preferred me to select the subject; after choosing my subject as above, he replied by saying he had put me down for that subject, but he desired me to say all I could about marketing of honey, and was sorry I had not selected that subject, but that now it had been assigned to another, who he thought was not quite as familiar with the large cities in the Eastern market as I was, and I would present an entirely new phase of it; in other words, he wisht me to read a paper on marketing and selling honey under another heading. I say this as an explanation that if I dwell more at length on some phases of marketing honey than I do on my title subject, you will understand why I do not stick to my subject.

First, then, the products of the bee. For some reason the word pollen was inserted by mistake for wax; pollen is a product of a flower only produced by Nature to further the race, and produces fruit, but used by the bee to dilute honey and make what we call "bee-bread" to feed the young bees. Beeswax is solely the product of the honey-bee; it is at first liquid, derived from the blood by cell action, and then transuding the structureless membrane and assumes the slight form of a scale.

The abdomen of a worker-bee is arranged in six dorsal and six ventral inelastic plates which may move upon each other, because they are united by delicate membranes, giving to the whole the arrangement of the tucks of a child's dress.

These membranous glands are as smooth as glass, and present a flat surface from which the fluid wax is distributed and instantly cooling becomes flaky. There are eight of these cooling-dishes on the abdomen of the worker-bee. Any one taking up a bee during the honey-gathering season, and examining it under a glass, can see these scale formations.

Original beeswax on being supplied to the glands is pure white, but we cannot get it in this condition for mostly it is slightly varnisht by propolis, which takes the hue of the flower the bee is working on. We can bring it back to its original color by lenses under the direct rays of the sun, and is much sought for by the drug-trade, and brings from 20 to 25 cents a pound more than the other beeswax.

Propolis is used by the bees as a cement and a varnish in the new comb. The cell-walls are varnisht by it, which makes them stronger. It is gathered and carried in pollen-baskets as is pollen, and is thinned down by the bees themselves. It is taken from the leaf-buds of various shrubs and trees, such as poplar, alder, beech, willow, fir, and others. It is hardly neccssary to add that it is a great nuisance to the practical bee-keeper, sticking to the fingers, and varnisht over all his nice, polisht sections.

Honey is the desideratum of the bee-keeper, if not the bee itself. Honey is evaporated nectar converted from cane-sugar into a grape-sugarlike substance by the bees, in their honey-pouch, by mixing a saliva provided by Nature for that purpose, and then deposited in the cell.

Bees cannot make honey out of granulated sugar, nor can they make it out of any other artificial, sweetened syrups. While an article so fed might be mixt with the bee-saliva, yet it is not honey unless it is the nectar provided by the plant-life. Nectar is the fluid which flows at the time of the plant's fertilization, and is of a peculiar chemical property, and cannot be made artificially under any conditions. Chemical analysis has reacht the stage in which the slightest percentage of artificial adulteration of honey can be detected.

When the nectar is so mixt by the bees and deposited in the cell, it is thin like water, and is 25 percent solids, and when evaporated by the bees it is 75 percent solids. This is done by a very rapid action of the bees' wings, and so quickly that honey extracted that is gathered in the morning and left in the hive over night, is much heavier than that gathered and extracted in the afternoon of the same day. Many large extracted-honey producers mark their packages "morning honey" and "afternoon honey."

When honey has reacht the degree above noted, the bees cap it over and then it is pronounced right for the market. I hardly dare more than touch upon these things, for I fear I will get into a very ocean of thought and development that would occupy one of your entire sessions, if not the entire time of the convention, so I pass quickly on to some of the phases of marketing honey.

First, the man himself, the bee-keeper or salesman. How shall he achieve success? How can he sell his product to the best advantage? Not every man can be a successful salesman—it is a gift. I am now presuming he is marketing his own product, but there are certain characteristics that he must have at least a share of if he is to succeed. One is honesty. Why, you start at once to say, "Do you question such a thing?" I reply by saying that after spending 20 years of my life as a salesman, and coming in contact with the men of almost every nation, I find that misrepresentation and falsehood are the ground-work upon which a large percentage of salesmen try to build up their business. It often succeeds for awhile, but eventually it is bound to fall.

If yours is light basswood honey, don't call it white clover. If your honey has 10 percent of sugar syrup to keep it from granulating, don't call it pure. (Don't feed your bees on sugar to build up on in the spring, after you put on the supers or top story). If your honey is carried over from last season, don't say it is the new crop. If you sell to two stores near together, don't tell one he is the only store you "sell to in this vicinity." It is not good policy to mention to any customer the other customers you sell to, or the amount. First, it is an unkind thing to expose your friend's business; and, second, if it is an extra-large amount you have sold him, the other grocer will at once doubt your assertion anyway.

Again, don't believe all your customers tell you, for many things are said in a half-serious tone to get you to drop in price, and they really don't mean to tell you a direct

falsehood. For instance, when you show your customer a comb of fancy white clover, and say you ask 16 cents, you find he will reply to you very often, "I can buy some very nice honey at 11 cents;" but he doesn't tell you that it is buckwheat or some other honey much inferior in quality.

Again, you must make a study of human nature. Some customers you can slap on the back and say, "How are you, old fellow?" Others would be shockt at such proceedings, and order you out of the store. Here is a great secret of the salesman who studies his customer, and learns his personality and caters to it; by so doing he can often secure a buyer that will not leave him for either cheaper prices or better quality, and this is the trade that is worth having.

Remember honey is a luxury, not a necessity. If your customer is busy, don't bother him. If he likes a joke, tell him one. If he likes a little history about bees, give it to him. If he is fond of honey on his own table, present him a jar or comb with your compliments, and then be honest with yourself. There is an old saying that if a man tells a lie repeatedly, in time he himself will honestly believe that it is the truth.

We become very much biast by what honey we produce ourselves; but because we may produce white clover or other honey it does not make it for that reason alone the best goods. The man from Florida says mangrove or palmetto is the best in the world; in California, the sage; in the Carolinas, the ti-ti; Maryland, the blue thistle; Colorado, Utah and Arizona, alfalfa; New York, basswood; Pennsylvania, the clover; Delaware, smartweed and heartsease; Michigan and Wisconsin, willow-herb—and so on.

Now you ask me who is to be a judge to decide what honey is the best honey produced by this country to-day, represented by this session. While I realize that cultivated taste has largely to do with a man's judgment of which is the best, the only way to decide is by popular judgment, and not from any locality. Having traveled very extensively over the United States and made this a special subject of study, I would not question for a moment the popular verdict, which is for white clover; and I will say that if you took one man from every State in the Union and sent him samples of all the honeys from the different States that I have mentioned; let him be a man who does not use tobacco or liquor in any form (as tobacco and liquor both destroy the nerves of taste in the tongue and gums), and let him be a man who is in no way interested in the honey-business, and if three-fourths of them don't decide that white clover is the best then I don't know anything about it; but I have tried it so often, and know the territory, and the verdict has always been the same.

Another condition that the producer of honey has to deal with is what is called the cut-throat competition of grocery-stores in our large cities. I believe in honest competition, and especially where the purchaser demands lower prices. Take for instance, a comb of honey. A grocer will not sell one more comb in a year at 17 cents than he would at 19, nor would he sell one more comb at 21 cents than he would at 23 cents. Your wife and family, or my wife and family, visiting the stores to make their purchases do not demand lower prices on honey, mainly for the reason that honey goes further than almost any other article of food purchast, and being a luxury, and considered a delicacy, a few cents in price makes no difference.

Now we see every year a large firm here on a prominent street that fills their window full of comb honey. It is of inferior quality, but a very fair appearance. They do this every year, sometimes in August or early in September, and mark it at a price below which any other honest grocer can buy white clover honey and sell it at a profit. What is the result of this action? It immediately fixes the market for the others to follow, if they will, and in many cases the purchaser is the sufferer by the storekeeper being compelled to buy inferior goods to compete with his neighbor's prices.

If the purchaser demanded the low prices I would have nothing to say, but when the dealer uses honey as a "leader," and then makes it up on his teas, coffees and other articles, then the honey-purchasers are the sufferers.

And now, no doubt, you are anxious to know what packages are the best to put honey up in. I have been surprised, time and time again, to know the difference there is in different localities on this subject. One city 25 miles from another city will handle entirely different kinds of package. I would say that a large-mouth glass package is the best, and one that can be sold at popular prices holding one pound of honey, and less; where over a pound of honey is desired a tin package is much preferable. These are sold very largely in 6 and 13 pounds.

The largest consumers of honey are the manufacturers. It is used by brewers who buy it in barrels, and tobacco manufacturers, as well as biscuit-bakers. One singular thing about the biscuit trade is that there is no honey produced in this country that keeps the freshness and moisture of the cake as well as Cuban and Porto Rico honey. Large lots of Porto Rico honey have been imported into the United States this summer, but, on account of the scarcity of other honeys, it has brought a good price. As this is to be embodied in a paper by another person, I will only say that our new possessions, to my way of thinking, are going to do a great harm to the bee-keeper.

While many things I have said in this paper are, no doubt, stale news to quite a few, there may be some here for whom I have dropt some thoughts that may be a benefit. If I have accomplisht this, I shall feel fully repaid.

W. A. Selser.

Mr. Abbott—Can honey be considered a luxury? It is not a luxury at my table; if we don't have it, my wife would feel the effects of it. I think we make a mistake when we teach that it is a luxury. I think it ought to be emphasized that it is a *necessity*. In almost any market you can get two pounds of honey for what a pound of butter would cost. If you can have but one, you would better let the Jersey butter go. It is all a matter of taste. I do think we should stop this talk about honey being a luxury.

Pres. Whitcomb—I agree with Mr. Abbott. I believe one pound of honey is worth more than two pounds of pork or 50 cents worth of patent medicine. Kidney disease is benefited by the use of honey. Children are liable to this disease, and honey will be of great benefit to them.

Dr. Mason—(I have had it revealed to me why Pres. Whitcomb and Mr. Abbott were so sleepy this afternoon. They have not been having honey to eat since they left home!) There is something more in this, it seems to me. In our locality extracted honey is not a luxury, but comb honey is. I cannot sell comb honey, but I can sell extracted honey, but I would not sell my butter three pounds for 25 cents, tho I do sell my honey at 10 cents a pound, or three pounds for 25 cents. Our president says a pound of honey is worth more than 50 cents worth of patent medicine. Well, that depends upon the medicine. Some medicines are worth more than their weight in gold in curing disease.

Pres. Whitcomb—I did not say that. I said it would be worth more than *patent* medicine.

Dr. Mason—Now you are further off. You say I sell honey too cheap. I wish Mr. Doolittle were here to help me. There is one thing in which I agree with Mr. Selser. I have had charge of many exhibits of honey and other foods that require tasting in judging, and I never choose a man as judge who uses tobacco, or tea and coffee, if I can help it. Don't take a man who smells of tobacco and nicotine, and try to sell him honey by tasting it. He can't tell a good thing by its taste.

Pres. Whitcomb—Mr. Selser, what do the manufacturers pay for the poorer grades of honey for baking?

Mr. Selser—Five cents a pound.

Pres. Whitcomb—Now, why not take this honey and put it on the table?

Mr. Abbott—About 16 years ago my health failed me. My voice failed me entirely. I said I would be all right in a short time, and my brothers said, "Yes, he will be all right." I knew what they meant. I went out West to die. A man askt me, by accident, if I didn't want to go into the honey-business. I began to produce and eat it, and presently my voice came back, and I could stand up two hours and speak.

Dr. Miller—I have been trying to find out what you mean by the luxury business. Take two articles to sell, and tell people that one is a necessity and one is a luxury. Which one will they take first? There need be no conflict, because in a sense honey is a luxury and it is a necessity. I am not sure that we are making a mistake by calling it a luxury.

Mr. Niver—I don't believe it will make a particle of difference. But I wish to dissent from one thing in the paper, and that is that you can sell as much honey at 19 cents as at 17 cents per pound. It is not down to hard-pan. When Mr. Doolittle tells of selling honey at a certain price, how much was wheat?

Mr. Danzenbaker—I differ from Mr. Selser in some things, but I agree with him in part. Not every one can produce honey; some people are afraid of the stings. There are people who buy it to eat, and as medicine. It is getting

to be fashionable in Washington to eat honey. Let it be announced that the President eats honey and you will sell plenty of it. Those who eat honey are better for it. Dr. Mason says he likes honey better than butter.

Dr. Mason—I beg pardon, but I didn't mean just that. Both are needed at our house, but altho I like honey, I feel sure if one—honey or butter—had to be banisht, honey would have to go. Mr. Danzenbaker has been telling of his success in selling honey in Washington, and I have been wondering if people didn't buy honey of him for the same reason that they buy of me sometimes—to get rid of me.

Next W. E. Flower, vice-president of the Philadelphia Bee-Keepers' Association, gave an address on

Source of the Honey-Supply in and Around Philadelphia.

Mr. Flower's address was illustrated by a large number of stereopticon views, and no report can be given that would present an adequate conception of the views shown, and of the wit and humor that seemed so readily to flow from Mr. Flower's tongue, often convulsing the large audience with laughter, and at some of his sallies that seemed to be unintentionally made, it took the venerable president and other staid members some time to work off, in hand-clapping and laughter, their stored-up surplus of appreciation of Mr. Flower's witty hits in describing some of the views.

The first view shown was a life-like picture of Father Langstroth. After a few deserved words of praise of the original of the picture, Mr. Flower said, "Now, in imagination, we will take the trolley and go to the home of Mr. Selser, and take a look at his apiary, a picture of which I show you. Mr. Selser never uses a veil or gloves when working with bees—in the winter time. [Laughter.] His neighbors say he is trying to get a cross between bees and lightning-bugs. They said nothing about his feet, which may be compared in size to those of a man who complained when a horse stept upon his foot, and a by-stander remarkt, "The horse must step *somewhere*."

The next view was of Mr. Flower's apiary. Mr. Flower said, "My wife said I ought to have gone into the house and got my other clothes. I told her people could see these were not my *other* clothes."

The next picture was of Mr. Hare's apiary, who reports a yield of about 40 pounds per colony this year.

Several views of Germantown apiaries were shown, one of which, belonging to Mr. Melon, was located on the house-roof. Some of the bees have to go miles for honey.

Referring to another picture, Mr. Flower said: "This is a view of the apiary of John Connor, of New Jersey. Some fellow got stung in the rear—I mean some fellow in the rear got stung."

"The next picture is that of Uncle Rastus, who does not believe in the modern methods, a fact that his apiary well illustrates."

"This is the apiary of Mr. Geo. Burwell, and this is Mr. Hahman's. I want to say right here that no one has done more to make this meeting a success than Mr. Hahman.

"This is a view of Mr. Kugler's apiary. He gave a very good idea of the honey-plants around Philadelphia in his paper last evening. Mr. Kugler has a wonderful dog. She is longer in the morning than at night, for he lets her out in the morning and at night he takes her in again." [Laughter.] In answer to a question, Mr. Flower said, "I am like Dr. Mason; when I don't know a thing I say so."

Dr. Mason—Dr. Miller, you mean.

Views were given showing an extractor, how a beginner keeps bees, using veil, gloves, etc. Mr. Flower then showed, by means of a picture how the bee-moth destroys the comb, saying that Langstroth compared the work of the moth to sin.

A student once gave the following definition of a crab: "A crab is a red fish, and he walks backward." His professor said: "The crab is not a fish, it is not red, and it does not walk backward. With these slight inaccuracies your definition is correct." Mr. Selser's paper is the same. Pollen is not the product of the bee; propolis is not the product of the bee; wax *is* the product of the bee.

Next came pictures of the bee, showing the difference between the queen, worker and drone, also one showing the growth of the bee from the egg to the fully developt bee.

Some people say bees destroy grapes. Mr. Flower contends that they do not until after the skin of the grape is broken, and said he had never found any one who would say that the bee is really the aggressor.

There was no danger of ancient honey being adulterated, because there were no glucose factories.

A picture of comb honey was shown, of which Mr. Flower said he was proud. A display on the screen of clover, white sage, goldenrod, basswood, Rocky Mountain bee-plant, poplar blossom (which produces rich but dark honey) ended the illustrations.

[Continued next week.]

CONTRIBUTED ARTICLES

Some California Statistics—First Introduction of Foul Brood—A Word of Warning.

BY HON. J. M. HAMBAUGH.

IN the year 1856 Messrs. Buck and Appleton, of San Jose, Calif., placed upon the market 400 pounds of honey, which sold at from $1.50 to $2.00 per pound. This was the first honey placed upon the market, of which we have any record, west of the Rocky Mountains, and was certainly the initiative of the traffic that has done a great deal toward making California famous, for California sage honey has acquired a reputation in the markets of the world of the highest character, and the most astute of the pioneers of this industry is Mr. John Harbison, of San Diego County, to whom we are indebted for most of the information given us. Mr. Harbison is not only a pioneer in the bee-industry, but also that of horticulture. An early day writer says:

"During the fall and winter of 1855, and again in the fall of 1856, he (Mr. Harbison) made large importations of the choicest fruit-trees from the most celebrated nurseries in the East. From these importations was started that great series of orchards which line the banks of the Sacramento River and adjacent country."

A former letter covers the period from this date up to 1859, giving Mr. Harbison's experience in the introduction of the "Honey-Bee Upon the Pacific Coast."

In the year 1857 Mr. Harbison invented the section honey-box, an invention which has done more for the advancement of comb-honey production than any other discovery in bee-keeping. For this he was granted a patent Jan. 4, 1859. At the California State Fair held at Marysville in September, 1858, Mr. Harbison exhibited the first section-box honey. His fields of labor were largely confined to the region of Sacramento until the year 1869. In the fall of that year a partnership was formed between him and a Mr. R. G. Clark, for the purpose of introducing bees into San Diego County; 110 colonies from Mr. Harbison's apiaries in Sacramento being landed in San Diego on the morning of Nov. 28, being the first bees of which we have any record introduced into the county. Other importations soon followed, and the partnership continued for four years.

The great success attending the enterprise, and the world-wide fame of their San Diego County honey soon attracted the notice of bee-keepers and farmers from all parts of the United States. Many came here, took up land, establisht homes, and embarkt in the bee-keeping pursuit, with other rural industries.

Mr. Harbison kindly gave me the following figures relative to the success of the firm of Harbison & Clark:

In 1870, 3,750 pounds of comb honey; in 1871, 17,000 pounds. There were no other producers up to this date in San Diego County. In 1872, 30,000 pounds, all comb honey; 1873, over 60,000 pounds.

In the year 1873 the firm shipt the first carload of honey overland by railroad to Chicago, which was sold at 27 cents per pound wholesale.

The following years, 1874 and 1875, being off years, Mr. Harbison was unable to furnish data. Emigration was also coming in, and the choice bee-ranches were fast giving way before the ax, grubbing-hoe and plow, and the onward travel of the hungry fruit-and-grain ranchmen have relegated the bee-men to the canyons and undesirable locations, there to make the best of their unfortunate conditions. Mr. H. adds:

"By this time the country had been settled up, and a very large proportion of the honey-producing vegetation cleaned off, thus destroying the bee-pasture, consequently bee-keeping has steadily declined, and only in the rougher

and isolated districts where any considerable number of apiaries are now found."

The following statistics I have from the San Diego Chamber of Commerce, which is a record of the number of carloads of honey shipt from that point, and does not include small shipments and honey shipt from other points in the county in carload lots :

1895, 75 carloads ; 1896, 15 ; 1897, 85 ; and in 1898, 10 carloads.

Thus you will see, notwithstanding the obstacles thrown in the way of the honey-producers of San Diego County, our output is no small factor in the commercial world. It must be borne in mind that the seasons of 1896 and 1898 were extremely dry seasons, and " but little honey produced."

The first foul brood (according to Mr. Harbison) was introduced by a man by the name of Wheaton, in a large shipment of bees purchast from M. Quinby in the fall of 1858. They were located in the vicinty of Sacramento (this State). The disease was prevalent in the Mohawk Valley State of New York, and elsewhere in the Eastern States, but was wholly unknown at that date west of the Allegheny Mountains. Mr. Harbison says :

" Wheaton opened up his diseased bees within one-half mile of one of my apiaries near Sacramento. The consequence was, that over one-half of my apiary contracted the disease by robbing honey from the diseased colonies. I used heroic treatment, burning up bees, hives, honey and all. Colonies may have the disease for one, two or more years befor dying out entirely, a condition that should not be tolerated. I know that when the disease once gets establisht it will be almost impossible to wholly eradicate it, but by constant care and heroic treatment it can be kept down so as not to cause serious loss, otherwise it will spread all over the country wherever bees may be kept, and also to those in rocks, trees, etc."

That the disease is still prevalent in California there is no question, and in the county adjoining that of our own ; as to whether or not it has as yet shown its cloven foot in San Diego County I am not sure, but yesterday I was informed of 300 colonies that had recently been cremated, with the exception of 30, and that it was still prevalent, tho heroic measures were being taken to eradicate it from the region.

As foul brood inspector of San Diego County I would say to all bee-keepers : Be ever on the alert, and should the hydra-headed monster show up, give him no quarters. California statutes know of no remedy but annihilation by fire, and it behooves every bee-keeper in the land to *know* that it is not tolerated in the community ; and he who is so care-for-nothing as to let his bees remain uncared for, with the disease lurking among them, is nursing an adder with which to sting his neighbors. Let this be your warning.

San Diego Co., Calif., Oct. 13.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

What Caused the Difference in Results Between Two Colonies?

Can you give me any information regarding a colony of bees that have failed to store honey the past summer? Another colony by its side—say about 20 feet away—stored some, not as much as usual, still enough for their own winter consumption, and a little for my use. The month of June was very dry here. NEW JERSEY.

ANSWER.—Without knowing more about the case it would be impossible to say why one colony should give no surplus while another only a few feet distant should store more than enough for its own use. Even with full knowledge of the case it might easily be that no satisfactory answer could be given. One of the puzzling things in beekeeping, especially to the beginner, is the fact that it often happens that two colonies sitting side by side, having the same field in which to operate, to all appearance equal in every respect, should be so unlike in the results shown in the surplus apartment.

Even altho no positive answer may be given to the question, it may be profitable to give some of the conditions that *might* exist to account for a difference in the amount stored by two colonies.

There may have been a decided difference in the strength of the two colonies. Other things being equal, the strong colony would outstrip the other in storing. If a colony of 50,000 bees stores a given amount, it by no means follows that a colony half as strong will lay up half the number of pounds of surplus. The smaller colony will store much less in proportion to its numbers, and in a year when the stronger colony stores only a small amount the weaker cannot be counted on to store anything.

There is a difference in the character of bees. Some seem to be more vigorous than others, and more industrious. So there may be two colonies side by side, equal in numbers, but so different in industry that one stores much less than the other. And in this connection it must be noted that when a colony has stored only a pound of surplus in its super while another has stored 20, it by no means follows that the latter has done 20 times as much gathering as the former. It has not even gathered twice as much, but only about a third more. For it is estimated that it takes about 60 pounds a year for each colony for its own consumption. Very likely that is putting it too low, for it is hard to tell just how much is consumed each day by the colony during the summer season, but it is very likely much greater during the summer activity than during the semi-torpor of winter. And as a colony often consumes 30 pounds of honey from October to May, it may consume much more from May to October. But putting it at 60 pounds for the year's supplies, the colony which has stored a pound of surplus has gathered 61 pounds, while the one which has stored 20 pounds has gathered 80 pounds. So there need not to be such a great deal of difference in the diligence of two colonies to allow the one to store 10 or 20 pounds while the other stores nothing.

There may be a difference in the laying of two queens, one laying more than the other, or beginning to lay earlier than the other, thus making a difference in the strength of the two colonies.

Swarming may make a difference. Other things being equal, a colony of bees in the North that never thinks of swarming is likely to outstrip one that divides its forces by swarming.

Altho two colonies may stand side by side, one may not forage on the same ground as the other. It may happen that in an apiary where nearly all are gathering dark honey, one or more of the colonies may be storing light honey. In such case it is not hard to believe that the amounts stored may be unequal.

The brood-combs may account for the difference. Suppose one hive has nothing but worker-comb, while the other has the equivalent of two combs having drone-cells. A lot of drones is reared by the one colony, which not only gather nothing but consume a lot, while the same space is used by the other in rearing workers that add to the stores.

These are some of the things that may operate singly or together to account for the difference in the amount of honey found in the supers of two colonies standing side by side, and the list is by no means exhausted.

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices : A sample for a stamp ; 25 copies for 40 cents ; 50 for 70 cents ; 100 for $1.00 ; 250 for $2.25 ; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 733 are well worth working for. Look at them.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Renewing Bee-Paper Subscriptions will soon be in order again. We trust that our readers will do this promptly. We believe they all feel that one dollar cannot be better spent than when given for 52 copies of the old weekly American Bee Journal; especially when they remember that they get 40 more copies than if it were issued monthly, and 28 more copies than if it were a semi-monthly.

There is another very important thing not to forget, and it is this: While nearly everything else is going up in price, the American Bee Journal will continue to be supplied at the usual figure—only $1.00 a year. We are now compelled to pay more than a few months ago for the white paper on which it is printed; more for the printing, and more office rent. In fact, practically all connected with getting out a paper like the Bee Journal is higher in price now than a year ago, and still it will be furnisht at the old price of a dollar for 52 numbers. We believe that our thousands of readers will appreciate this, and will not only renew their subscription, but will do what they can to get their neighbors and friends who keep bees to subscribe for it. If just one-half of our readers would each send one new subscriber before next Jan. 1st, the old American Bee Journal would have a larger list than any bee-paper on this continent has ever had.

We do not offer to give one or two other periodicals free with a year's subscription to the American Bee Journal, but we do promise to give our readers in the future as in the past, the biggest dollar's worth of good bee-literature to be found anywhere. The old American Bee Journal speaks clearly for itself each week—we need say no more than that.

More Experience with Honey-Barrels.—We wish to give a little further experience we had with handling honey in barrels early this fall.

We had bought four barrels of extracted honey in Wisconsin from a bee-keeper who had always put up the extracted honey in such a package. The honey was started off all right, but when it reacht Chicago one barrel had only half the contents it had when delivered at the depot in Wisconsin. It was about 160 pounds short.

When our expressman was loading the honey into his wagon at the Chicago depot, the whole head of one of the other barrels came out, and before he could get the barrel up on end, fully half of that barrel of honey was spilt.

In all, there was about $20 worth of honey lost in this one shipment. Now, $20 would pay for quite a number of tin cans, which are ever so much safer for holding liquid honey. Of course, if the honey is granulated, then it is all right to ship in barrels. But we don't want to risk getting any more liquid honey in them.

Doubtless all honey that is in barrels now is thoroly granulated, so that it will ship with perfect safety.

Europe vs. America as to Honey.—A writer in the American Bee-Keeper having said that until a few years ago the United States produced only half as much per colony as other countries where bee-keeping is carried on scientifically, F. Greiner takes issue in the same journal. He thinks the reverse is the case. He is sure the average for the past 25 years has been much lower in Germany, if not thru all Europe. Formerly, in his part of New York, 50 pounds per colony was counted an average crop, now perhaps 30, and California and other States are better, while in Germany 20 pounds is an average, with, of course, exceptionally better yields. But the German gets the better prices, and has a splendid trade in live bees. In Germany there are estimated to be 1,964,726 colonies of bees, and in the United States 2,400,000.

The Government and Apis Dorsata.—Dr. A. B. Mason says in the Bee-Keepers' Review that we need have no fear but that desirable aid will be given bee-keepers whenever they ask for it as to introducing the big Indian bee. While in Washington lately he had an interview with the government official with whom correspondence has been had, and was told that whenever the United States Bee-Keepers' Association should be satisfied that it was desirable to import Dorsata, and would so inform the department, all the aid they could furnish would be gladly given; and if necessary the department would give all possible aid in securing the desired information. But the Doctor does not seem to be enthusiastic about the introduction of the foreigner until the possibility of its domestication has been demonstrated.

Honey as a Daily Food.—In Gleanings in Bee-Culture Anton Leister speaks of the value of honey as a *food*, not as a relish or appetizer. He thinks honey, as usually eaten—a relish after the main part of the meal—is likely to be injurious because of its richness in nutritive elements. But he does not merely theorize. For six months he tried using honey in what most persons would consider large quantities. Bread and honey was more than half his daily food, and it formed the entire meal at least once each day. But with such hearty food he did not sit idle, but workt hard, doing such work as sawing wood and pitching hay. Once or twice the honey made him sick, but he ate it before resting when very tired, and he thinks beefsteak might have had the same effect under the same conditions.

The point to be emphasized in the case is that honey is a *food*, having great nutritive value. Whole-wheat bread

with honey made at least one meal each day, other food being eaten with the bread and honey at the other meal or two, in order to make the proper variety. Some days he ate a pound of honey a day, averaging, week in and week out, a third of a pound a day.

Progressive Bee-Keeping.—Root's "A B C of Bee-Culture" is a standing monument to the progressiveness of bee-keeping. It is literally a *standing* monument, for it is kept standing in type, each edition being brought up to date. Think of 67,000 volumes of this book being printed! That is something of a monument to the intelligence and progressiveness of bee-keepers. It is estimated that there are about 300,000 bee-keepers in the country. According to that, about one in four has a copy of the "A B C." Does one farmer in four own a $1.20 book devoted entirely to farming? Does one in ten?

Reformed Spelling seems likely to get a foot-hold in Gleanings in Bee-Culture. It called for a postal-card ballot of its readers as to whether it should adopt certain reforms in spelling, and has received quite a number of responses favoring the reform, with only one dissenting vote. M. D. Andes wrote: "At first I was opposed to the changes, but after reading the American Bee Journal for a time I rather like it." Gleanings will be welcomed as a companion to help make people like what is good for them.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal.

The Largest Linden in the World, as Editor Root thinks, is pictured in Gleanings in Bee-Culture. It is in Linwood Park, 30 miles west of Cleveland, Ohio, and is truly a monster. It is eight feet in diameter, and inside there is a hollow in which there is room for six or eight people.

Bee-Inspection in Tulare Co., Calif.—Josiah Gregg, bee-inspector for Tulare Co., Calif., in his last report to the supervisors, gave information of wide interest. He was appointed for 25 days, and this is his summary of work for 15 days in March and 10 days in September, as reported in the Pacific Rural Press: In March he found and destroyed according to law, three cases of foul brood. In September he reports as follows:

"I have inspected all the apiaries that were known to have foul brood at any time, and all bees within a radius of two miles of all infected apiaries, and have failed to find a single case of foul brood; and I have reason to believe that the disease of foul brood has been entirely eliminated from the county of Tulare. During my last term of 10 days I have inspected 1,182 colonies, an average of about 118 per day.

"I find by a review of all my reports for three years, that in the year 1897 I caused to be destroyed 28 cases of foul brood; in the year 1898, 16 cases, and in the year 1899 three cases, a total for my administration of three years of 47 cases of foul brood.

"Apiculture is fast assuming an enviable position among the most prominent industries of the county of Tulare. In the year 1898 five carloads were shipt from the county, and during 1899 10 carloads will be shipt, being about 130 tons, all extracted honey. There has been but little comb honey produced, probably enough to supply the local markets."

The Weekly Budget

Mr. O. C. Fitts, a bee-keeper of Kane Co., Ill., called on us Nov. 4, when in Chicago.

* * * * *

Mr. F. A. Gemmill, of Ontario, Canada, writing us Nov. 1, said:

"We had a fair season in our locality, but a poor season generally in Canada."

Mr. Gemmill is the assistant official inspector of apiaries in the Province of Ontario, so he has exceptional opportunity to learn of the general honey crop.

* * * * *

Mr. Geo. W. Collins, of Larimer Co., Colo., called on us last week. He reports a good crop of honey in his locality the past season. He expects now to locate in Sonoma Co., Calif. Mr. C. said one bee-keeper in a town of about 2,000 population in Larimer Co., Colo., has a local trade that requires 40,000 pounds of extracted honey annually to supply it. The bee-keeper referred to has five apiaries, and sells his honey at 6 cents a pound at his home, the customers bringing their pails or other vessels to get the honey in. But 6 cents a pound is "away down" this year.

* * * * *

The Republic of Chile is fast coming to the front as a honey-producing State. A German paper speaks of it as the California or Eldorado of bees. It enjoys a favored climate, greatly simplifying wintering. Bee-keepers in that country are ably represented by El Apicultor Chileno (The Chilean Bee-Keeper), edited by Juan Dupont-Lafitte, a man who is fully abreast with all that is going on in beedom. Chile might be represented by a green ribbon an inch wide and a yard long, its real length being about 2,600 miles. With the Andes Mountains on the east and ocean on the west it enjoys a fine climate for bees. Their summer is, of course, our winter.—Gleanings in Bee-Culture.

* * * * *

Hon. Eugene Secor, General Manager of the United States Bee-Keepers' Association, will attend the next meeting of the Minnesota Bee-Keepers' Association, to be held in the court house at Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899. He will speak on "The Adulteration of Extracted Honey, and How to Prevent It." The latter part of this subject is just what bee-keepers in many places have long been wanting to know. We hope Mr. Secor has a successful method, for 'tis said, "An ounce of *prevention* is worth a pound of cure." Then there's no place on earth, we believe, where there is such large opportunity for applying a method for the prevention of the adulteration of honey as right here in Chicago. We would welcome with open arms both Mr. Secor and his prevention scheme—if the latter isn't patented!

* * * * *

Mr. W. A. Pryal, of San Francisco Co., Calif., writing us Nov. 4, said:

"I presume you have already been informed of the glorious fall rains we have had; the grass is now green everywhere, and the air is balmy and delicious. The October rainfall was the greatest ever recorded for that month in California.

"Recently I embraced the opportunity to make a friendly call upon Mr. Thomas G. Newman, and I was surprised to find that he can see with difficulty. He volunteered the statement that his eyesight is getting so bad that he is almost blind. He attributes it to nervousness—he having head-troubles very much. I should say that in this latter affliction he is not altogether unlike the late Father Langstroth. I am very sorry for Mr. Newman's misfortune, and I trust he will soon recover his sight. He states that he hopes to take a vacation soon and spend some time in the mountains recuperating."

We had received a letter from Mr. Newman a few days before hearing from Mr. Pryal, in which was mentioned the affected eyesight. Surely, all will regret to learn of Mr. Newman's affliction, and hope for speedy and full recovery.

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We handle by far the bulk of all the honey sent to New York, and our volume of business enables us to make the charges very reasonable.

Why, then, should we not be able to handle your crop to advantage, and do you justice in every respect?

We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

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Prices in Germany.—Altho we may envy German bee-keepers the prices they get for honey, when it comes to live-stock we would hardly be satisfied with some of their prices. In Gravenhorst's Bienenzeitung, C. Burgdorf advertises heather swarms at 63 cents to $1.00, according to weight and strength, and laying queens after Sept. 15 at 25 cents.

As Others See Us.—W. Woodley, in the British Bee Journal, speaks in not the most flattering terms of the way some things are done in England, and says:

"Sections ought to be so carefully graded that every section in the dozen or gross is as nearly equal in quality and close approximation of weight as possible. This will have to be done if we are going to make progress. Many American bee-keepers use mechanical 'cleaners' for preparing their sections for market and adopt the 'no-drip cases' for transit. This arrangement prevents any 'drip' of honey from a broken section damaging the layers below. I have written on this subject frequently, and the more I inquire into the matter the more convinced am I that we Britishers are much behind in preparing our commodities for market; possibly necessity was the mother that brought forth the 'inventions' for improving these things elsewhere, but the fact remains that they have stolen a long march on us in these things, and, in consequence, command the best market prices for their painstaking labors."

As We See Others.—W. Woodley, in the British Bee Journal, tells family secrets about marketing honey, as follows:

SAVE FEED.

Feed is fuel to the animal economy. It is burned up to supply internal heat. If it is heated (cooked) before it goes in to the animal's stomach it saves that much fuel (feed).

Electric Feed Cookers save feed, save money and produce better results. Made of best cast iron with steel linings; boiler made of extra heavy galvanized steel. Capacity 25 to 100 gallons. Circular and price free.

Electric Wheel Co., Box 16, Quincy, Ill.

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.

118 Michigan Street, - CHICAGO, ILL.

DON'T TAKE CHANCES!

Buy an Incubator and pay for it before giving it a trial. The firm who will not sell on trial have no faith in their machines. We sell the celebrated **PREMIER INCUBATOR ON TRIAL.** Also sole manufacturers of **Simplicity. Catalogue and Poultry Helps, 5c.**

Columbia Incubator Co. 5 Adams St., Delaware City, Del.

Please mention Bee Journal when writing.

Root's Column

The Home

—OF THE—

Honey-Bees

as seen thru the Camera.

If you are not a subscriber to **Gleanings in Bee-Culture**, we will with pleasure send you free a copy of our double number which will be issued Nov. 15. This will contain 8 full pages of illustrations of our apiary and views of our factory, inside and out. To those who have never visited our establishment this will be a rare treat. The only condition is that you send your request promptly and mention the American Bee Journal. Absolutely no charge and the more applications we receive the better we shall like it. In this number you will find a dozen or more special offers for our bee-keeping friends, but these will not be given in this column; you must send for sample copy. Be sure to say Nov. 15th issue.

Watch for our ad. in this column next week.

THE A. I. ROOT CO.
MEDINA, OHIO.

"All my sections are carefully graded, and clean as hands and care can make them. Those of the finest quality and color (white clover and sainfoin), well filled and sealed (except cells next to the woodwork), with combs built out and attacht to the wood of the section; such form our first grade or 'selected quality.' These we glaze in lace paper and pay carriage to London or other places of about equal distance at 10s. per dozen; the next, or second grade, at 9s.; and all below that we just sell for what they are worth—say 7s. 6d. to 8s. per dozen. We rarely have an inquiry for unglazed sections; and 'glazing' means a big job with our two large apiaries; but it pays."

And that's the bold Britisher that was talking about American bee-keepers commanding the best market prices for their painstaking labors. How many Americans take such pains in marketing? and how many get 21 cents each for sections, and 15½ cents for culls?

Queen-Cells Started Without Royal Jelly.—There has been some dispute as to whether it was the shape of the cell or the royal jelly put in with the larva that determined the bees to rear a queen. W. C. Gathright says in Gleanings in Bee-Culture:

"I have made many experiments, giving royal jelly to one batch of cells and another batch beside them without any; and if there is anything I am sure of about bee-keeping it is that it does not make one particle of difference whether you put in the royal jelly or not, either in artificial cups or drone-cells. Any one who wishes to prove this can go and examine the cell-cups, as I have often done, two or three times after putting in the royal jelly and the larvæ, and they will find the royal jelly lickt out clean. I have examined them thus dozens of times, and never have found a single instance where the bees would leave the feed which I put into the cell. Even when every cell was accepted they have always removed the feed which I had put in, and then commenced to feed the larvæ to suit themselves."

Bees on the Farm.—If there are no bees within two miles of your farm, it would pay you to buy one or more colonies and keep them, even tho you should never take an ounce of honey from them. You need them to fertilize flowers of different kinds. Fruits especially. If at the time your apple-trees are in bloom it is so cold and wet that bees do not fly, you need not count on much of a crop of apples. If you look hastily at an apple-blossom, you might not think bees are needed to carry pollen to the right place, for are not stamens and pistils on one and the same flower? And will not the pollen fall of itself from the stamen upon the pistil? Ah, yes, but watch closely, and you'll see that Dame Nature has provided against such close breeding. The stamens and the pistils do not mature at the same time! So when the pistil is in a receptive condition, some outside agency is needed to bring the pollen from elsewhere, and this work is chiefly done by the denizens of the hive. Besides, there is more vigor in the fruit if the pollen is brought from some other plant or tree.—National Stockman.

The Doolittle Plan of Rearing Queens, as practiced by Mr. Doolittle himself, requires no queenless bees, the cells being started from the beginning in a story over an excluder, with a laying queen beneath. Some say they cannot get the cells started without first giving them to queenless bees; others say they can get a larger number started by first giving them to queenless bees. Here is the plan of W. C. Gathright, as given in Gleanings in Bee-Culture:

"About getting them accepted in colonies having a laying queen, I have had them accepted in upper stories, but it is very uncertain about the number they accept—generally very few; sometimes only one; so to make sure of getting enough I have them started in queenless hives. I can

SUFFERERS

FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO, 34 Central Music Hall, CHICAGO.

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Thousands in successful operation. Lowest priced 1st-class hatcher made.

Circulars free. Send 6c. for Illus. Catalog

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The Mississippi Valley Democrat

—AND—

Journal of Agriculture,

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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

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BAUSCHER'S... ...STOCK WINS

in the hands of his customers and **takes every prize in sight. It never fails.** We lead in quality and lowest prices. We have the largest pure bred poultry farm in the Northwest. Our fowls are all **strong, healthy and vigorous.** Send for our Mammoth annual poultry guide and learn how to make big money. Worth $25—sent for 15c.

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WE CAN'T USE

common wire in **Page** Fences. It takes specially tempered wire to hold the coiled shape.

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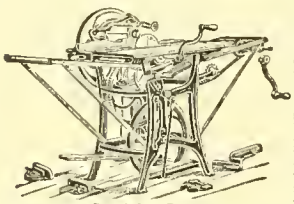

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. WALTER S. POUDER, 512 Mass. Ave., INDIANAPOLIS, IND.

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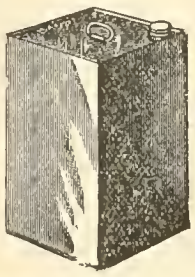

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ALFALFA HONEY

In 60-pound Tin Cans.

WE have been able to secure a quantity of WHITE ALFALFA EXTRACTED HONEY which we offer for the present at these prices, on board cars here in Chicago: Sample by mail, 10 cents; 2 60-pound cans, in a box, 9½ cents a pound; 4 or more cans, 9 cents a pound. **Cash with order** in all cases.

Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

Dairy Farm For Sale

consisting of 235 acres, as good a farm as there is in Lake Co., Ill., located only 20 miles north of the Chicago court-house, on the old Chicago and Milwaukee stage-road (or Milwaukee Ave. now), and 1½ miles from Prairie View on the Wisconsin Central railroad. The beautiful Desplaines river runs thru the pasture, besides the timber land. Also 19 acres of good timber one mile northeast of Half Day, making 254 acres in all.

The farm is not only a splendid one for dairying, but is also a good location for bees. There is white clover, sweet clover, basswood, etc. The editor of the American Bee Journal has been on the farm and will confirm every statement concerning its value.

Address, for further particulars, terms, etc.,

Mrs. J. B. Ayers, Libertyville, Lake Co. Ill.

IF YOU WANT THE

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That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

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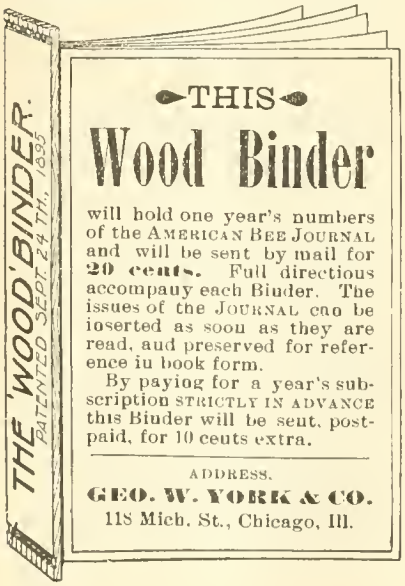

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will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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118 Mich. St., Chicago, Ill.

The New York Bee-Disease.—Editor Root says this about it:

"I have just received a letter from Bacteriologist Howard, of Texas, in which he says he has examined, microscopically, several specimens of affected brood sent from New York, and that *none* of them are foul brood, or in any way related to that disease. It is an entirely new malady, differing from pickled brood. Dr. Howard is not ready yet to make a complete report, but will do so later for Gleanings in Bee-Culture. In the meantime it is of the highest importance that the bee-keepers of York State know the result of the experiments thus far, as it may save burning of colonies, and possibly of whole apiaries, for what is supposed to be foul brood, but which is not that disease at all. The fact that this new malady is in many cases reported to disappear of itself—a thing that real *Bacillus alvei* never does—rather confirms Dr. Howard's diagnosis. In the meantime, bee-keepers of New York are to be congratulated that at least *some* of the affected brood is not the dreaded foul brood."

Robber-Bees.—Editor Hutchioson says, in the Bee-Keepers' Review, there is no doubt bees can learn things, and they learn to follow the bee-keeper about the yard when he is opening hives. They also learn, when a bee enters the hive with booty, to start for the place where they have known sweets to have been exposed previously. One summer, when rearing queens, he put out daily a batch of hooied cappings. The bees soon learned where to go, and within a few minutes after being taken out the can of cappings would be "roaring full" of bees. "They would grub away for an hour or more, and then gradually dwindle down to a few dozen. Even while they were at their busiest, I could go out in the apiary and open hives with no more trouble than usual." He very proposed this end still not have any queenless hives in the apiary. A few hours to half a day before giving the cells I remove the upper story from my cell-building colony, and place it on a bottom-board, then put a cover on the brood-chamber, and set it aside with entrance turned around; then the upper story is placed on the stand. Thus you see I have a colony made queenless ready to start the cells; then when the cells are well started, which will be in a few hours, the brood-chamber is put back on the stand, and the upper story, having the cells, is lifted off its bottom-board and placed back on the brood-chamber, having, of course, a queen-excluder between."

GOOD WHEELS

MAKE A GOOD WAGON.
Unless a wagon has good wheels it is useless. THE ELECTRIC STEEL WHEELS are good wheels and they make a wagon last indefinitely. They are made high or low, any width of tire, to fit any skein. They can't get loose, rot or break down. They last always. Catalog free.
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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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One Style Only, OUR BEST.
Warranted to last Ten Years without repairs and to out-hatch during three trials any other incubator—bar none; THIS OR YOUR MONEY BACK. Built for business—sold on honor. 16-page illustrated circular and price list FREE. Poultry Manual and Catalogue No. 50 (160-pages, 8x11in.) entitled, "How to make money with Poultry and Incubators" sent postpaid for 15 cts. in stamps—worth dollars. Address nearest office.

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Chicago, Ill. Wayland, N. Y. Boston, Mass.

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white) 60c	$1.00	$2.25	$4.00
White Clover 80c	1.40	3.00	5.00
Alfalfa Clover 60c	1.20	2.75	5.00
Crimson Clover 55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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Extracted Honey Wanted

ANY KIND OR QUANTITY, SO LONG AS IT'S PURE...

If you have any Extracted Honey for sale, please mail us sample, and state quantity, how put up, and lowest cash price wanted delivered in Chicago. Address,

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PATENT WIRED COMB FOUNDATION
Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation
Has no Fishbone in the Surplus Honey.
Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,
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California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

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The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.
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We are distributors for ROOT'S GOODS AT THEIR PRICES for southern Ohio, Indiana, Illinois, West Virginia, Kentucky, and the South.
MUTH'S SQUARE GLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.
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erly inveighs against the practice of shutting up a hive or carrying it into the cellar when robbers are found working at it, for being enraged at not finding what they expect they pounce upon adjoining colonies, whereas if they had been allowed to clean out the hive they were at they would gradually have quieted down without further trouble.

GENERAL ITEMS

A Good Suggestion.

The past was not a good season in this locality for honey—only a half crop, and that dark and only fairly palatable. I have some very fine white clover honey two years old, which I find ready sale for at 15 cents per pound. Bee-keepers act unwisely by rushing their honey into market when honey is plentiful, and get low prices. Keep it in good condition for "off years," like the present, and get good prices, and keep up your trade. ROBT. B. WOODWARD.
Perry Co., Ohio, Nov. 1.

Bee-Keeping in Nevada.

This has been a very poor year here for honey, most bee-keepers realizing a light crop, 24 sections per colony being a fair average. Prices were rather low, ranging from 8½ to 9½ cents, some choice white bringing 10 cents. I was more favored, having produced 60 pounds per colony, and I got 10 cents a pound for all of it. I also have the honor of having cased the finest lot of honey that was loaded at this point.

It is not necessary to say that the "Old Reliable" has been my authority, and will be so long as I can raise the "necessary" to procure it. When we can procure the experience of such able manipulators as Doolittle, the Dadants and others, at $1.00 per year, I think it money wisely invested.

My bees are flying every day—not a case of robbing this fall—and they have gone into winter quarters in fine condition.

Some bee-keepers here take no paper at all, and do not want any, and I can see the "benefit" they derive, most of them not having produced enough honey this season to pay for supplies and smoker-fuel.
Reno Co., Nev., Nov. 4. JNO. W. LYELL.

He Had the "Tobacco Heart."

Mr. A. I. Root for years has been trying to get those addicted to the use of tobacco to give it up. On being informed that two who had done so had returned to the useless and harmful habit, he wrote the following for Gleanings in Bee-Culture:

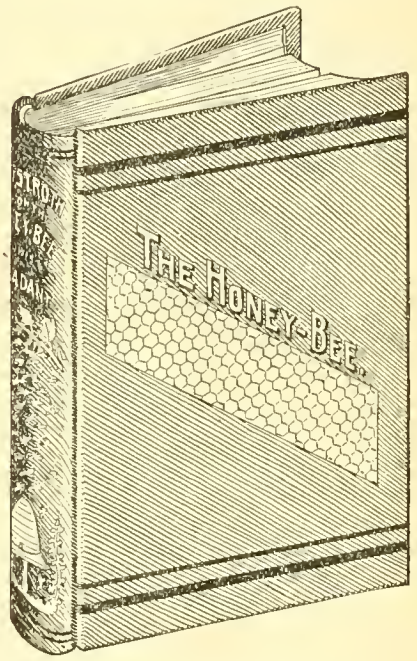
I hope and pray that they may change their minds, and for the sake of health, if nothing more, give up the weed after all. Let me tell you a little story—something that happened right here on our premises, and you may tell the story to your two friends.

The man who files our saws, Mr. Albert A. Herkner, has been for many years in poor health. He consulted different doctors. One called it stone in the gall-bladder, or something like that; another, heart-disease, and I guess they did not know exactly what did ail him. He kept having his bad spells every little while for two or three years. Finally, some time in the summer, he had to give up work entirely, and it was talkt around among his friends that he probably never would do another day's work for The A. I. Root Co., or for anybody else, for that matter, in this world. We all felt sad about it, and a new saw-filer was installed. But he greatly needed a little instruction, especially in regard to using the saw-filing machine, by Mr. Herkner himself, and we accordingly askt Mr. H. if he

Langstroth on... The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the Ameri-



can Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helpt on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $2.00. But, as a **SPECIAL OFFER,** and only until next Jan. 1, we will mail this book for only 75 cents provided you send enough on your Bee Journal subscription to pay all arrearages and to the end of 1900. Those having already paid their Bee Journal subscription to the end of this year, need send only $1.75 for the book and the Journal for 1900. This is a splendid chance to get a grand bee-book for a very little money.

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George W. York & Co.
118 Michigan St., - CHICAGO, ILL.

LOTS OF EGGS MEANS LOTS OF MONEY.

If you can double the eggs you double the money. Green Cut Bone is the only thing which will double the egg product. It is easily secured, easy to prepare and feed and is cheap.

MANN'S NEW BONE CUTTERS

are the difference between profit and loss in the poultry business. Cut fine, fast and easy. Mann's Clover Cutters, Granite Crystal Grit and Swinging Feed Trays make the business profitable. Catalogue free. F. W. MANN CO., Box 7 MILFORD, MASS.

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Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention the Bee Journal when writing. MARSHFIELD, WISCONSIN.

Best.... Basswood **Extracted Honey ...**

IN BARRELS.

WE have some very fine WISCONSIN BASSWOOD EXTRACTED HONEY in barrels, each holding 360 pounds of honey, which we offer at 9 cents a pound, f.o.b Chicago, cash with order. Sample by mail, 10 cents. We can ship promptly. Address,

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G. B. LEWIS COMPANY,

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CAN FURNISH YOU WITH THE VERY FINEST

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IN THE WORLD.

Parties wanting goods before new catalog is issued will please write for quotations. We want every BEE-KEEPER on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

A PRACTICAL POULTRY BOOK One which covers every detail of the industry from incubation to market is our **20th CENTURY CATALOGUE.** It will teach you from the practical experience of others what it would take you ten years to learn. Among other things it tells about the latest improvements in the world famous **Reliable Incubators and Brooders.** Sent for 10c to pay postage. Reliable Inc. & Brdr.Co. Box B 2 Quincy, Ill.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

24 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **24** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

could not get down to the factory long enough to tell the new man something about the new work.

One day I was greatly surprised to see him on the street, looking fairly well. I stopt my buggy, and askt him to get in and ride. Then I began to ask him what doctor or what means had been used that he should be so much better. What do you think he said? Why, it is the old story. His last doctor was sensible enough to tell him that, in his opinion, it was the *tobacco* he used that was killing him, and that he would have to make his choice and do it soon—to go on with his tobacco, just as he was doing, and *die*, or give it up and *live*.

The doctor told him he had tobacco heart, and the announcement waked him up somewhat. He said if *that* was the case he would stop then and there and stop *entirely*. He did stop and gained so rapidly that in two or three days he was out on the street, and has been at work a good deal of the time for 10 hours a day for several weeks. He says he has a terrible fight with the old habit, but physically he is gaining strength every day. He seems glad to talk about it, and to tell his friends his experience, and has given me permission to tell it here in print.

A particular friend of mine, who takes care of my teeth, in speaking of Mr. Herkner's case, said he too had quit the use of tobacco in all shapes. He said he was getting to a point in life where he needed all the nerves there were to be had—that is, in order to do his difficult and intricate work as it ought to be done—and he had satisfied himself that tobacco saps the nerves of life more than any other one thing.

Well, there are several more right around here who are getting very rapidly to this very point, where it is a matter of life and death. No doctor can do anything for any man when tobacco is killing that man, unless he gives up its use; and our best physicians are asking their patients, "Which will you do—use tobacco, and *die*, or give it up and *live*?" A. I. ROOT.

We never have been able to comprehend why any one who desires to be clean and healthy should want to use filthy tobacco in any form. Tobacco contains a poison, and must naturally, to a more or less extent, be injurious to those who indulge in its use. Better let it alone, and be both cleaner and healthier.

No Surplus Honey.

Cold days have commenced to make their appearance here. My bees are all in their winter quarters on the summer stands. Last winter I lost all but 3 colonies; not on account of the cold weather, but the snowdrifts would block up the entrances. The past season I increast the 3 to 8 colonies. Besides all the honey they gathered, I had to give them 55 pounds of sugar to supply them for the winter. Using all the honey for the bees I had not a bit left for myself. I hope to have better luck this winter, and wish the best success to the American Bee Journal. CHAS. DUCLOS.

Saginaw Co., Mich., Nov. 6.

Common Elater or Spring Beetle.

PROF. A. J. COOK:—I mail you a queer insect, the name of which I cannot find. No one around here knows anything about it. I sent it to the office of the American Bee Journal, but Mr. York advised me to send it to you. When it was alive, and when taken between the thumb and finger, it would thump its head upon the table. It was not as black as now. It was found under the bark of an old tree.

De Kalb Co., Ill. JOSEPH MASON.

[The insect is one of the common Elater beetles. These are often called spring beetles, as when placed on their back they will spring up, often several inches, and strike on their feet. They do this by means of a peculiar spring-pole arraugement on the

underside of their thorax. They belong to the family Elateridæ, of which there are many species in our country, which range from the Pacific to the Atlantic, and from Canada to the Gulf. The fire-fly of Cuba also belongs to this family. Of course it should be "fire-beetle" and not "fire-fly." These beetles produce a large amount of light—enough, it is said, to light a room where there are enough of them. I have heard it said the ladies wear them in nets on their heads for this purpose. The grubs of some of these beetles are the so-called "wire-worms" which often do immense damage, eating off the roots of corn, grain and other plants. Here in Southern California they do immense damage in the alfalfa fields and in the deciduous fruit orchards. Some of the beetles are very large. The grubs feed on rotten wood. The grubs of one of these large beetles are often found in the decaying wood of apple-trees. The beetle of this species has large eye-like spots on its thorax, and is a very markt insect. While some of the wire-worms are among our worst enemies, most of these beetles, I think, do little harm.—A. J. COOK.]

Convention Notices.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

Colorado.—That "irrepressible" Colorado State Bee Keepers' Association will hold its annual convention Nov. 27, 28 and 29, in the State House, Denver, beginning at 10 a.m. As usual, the State Agricultural College will assist us. Every one should come loaded with ideas and subjects for discussion; those who cannot come should write soon to the secretary or the president and tell us what are the particular needs of your locality. The members will be the program—we know from experience that you will make a very lively convention. Come everybody—there is sure to be "a hot time in the old town." R. C. AIKIN, Pres.,
F. RAUCHFUSS, Sec., Loveland, Colo.
box 378, Denver, Colo.

Columbia's Success.

We wish to let our friends know of our latest success. We took both first and second premiums at the Illinois State Fair, Springfield, Ill., Sept. 25 to 30, 1899; also first premium at Macoupin Co. Fair, Carlinville, Ill., Oct. 3 to 6, 1899. Our premium notification reads: "As a token of highest excellence and the best exhibit at the Fair."—H. C. CLARK, Sec'y. Columbia Incubator Co., Delaware City, Dela.

BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

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118 Michigan St., Chicago, Ill.

Bee-Keepers' Photograph.—We have now on hand a limited number of excellent photographs of prominent bee-keepers—a number of pictures on one card. The likeness of 49 of them are shown on one of the photographs, and 121 on the other. We will send them, postpaid, for 30 cts. a card, mailing from the 121 kind first; then after they are all gone, we will send the 49 kind. So those who order first will get the most "faces" for their money. Send orders to the Bee Journal office.

BEE-BOOKS

SENT POSTPAID BY

George W. York & Co. 118 Mich. St. Chicago.

Bees and Honey, or Management of an Apiary for Pleasure and Profit, by Thomas G. Newman.—It is nicely illustrated, contains 160 pages, beautifully printed in the highest style of the art, and bound in cloth, gold-lettered. Price, in cloth, 75 cents; in paper, 50 cents.

Langstroth on the Honey-Bee, revised by Dadant.—This classic in bee-culture has been entirely re-written, and is fully illustrated. It treats of everything relating to bees and bee-keeping. No apiarian library is complete without this standard work by Rev. L. L. Langstroth—the Father of American Bee-Culture. It has 520 pages, bound in cloth. Price, $1.25.

Bee-Keepers' Guide, or Manual of the Apiary, by Prof. A. J. Cook, of the Michigan Agricultural College.—This book is not only instructive and helpful as a guide in bee-keeping, but is interesting and thoroly practical and scientific. It contains a full delineation of the anatomy and physiology of bees. 460 pages, bound in cloth and fully illustrated. Price, $1.25.

Scientific Queen-Rearing, as Practically Applied, by G. M. Doolittle.—A method by which the very best of queen-bees are reared in perfect accord with Nature's way. Bound in cloth and illustrated. Price, $1.00.

A B C of Bee-Culture, by A. I. Root.—A cyclopædia of 400 pages, describing everything pertaining to the care of the honey-bees. Contains 300 engravings. It was written especially for beginners. Bound in cloth. Price, $1.20.

Advanced Bee-Culture, Its Methods and Management, by W. Z. Hutchinson.—The author of this work is a practical and entertaining writer. You should read his book; 90 pages, bound in paper, and illustrated. Price, 50 cents.

Rational Bee-Keeping, by Dr. John Dzierzon.—This is a translation of his latest German book on bee-culture. It has 350 pages, bound in paper covers, $1.00.

Bienen-Kultur, by Thos. G Newman.—This is a German translation of the principal portion of the book called "Bees and Honey." 100-page pamphlet. Price, 25 cents.

Bienenzucht und Honiggewinnung, nach der neuesten methode (German) by J. F. Eggers.—This book gives the latest and most approved methods of bee-keeping in an easy, comprehensive style, with illustrations to suit the subject. 50 pages, board cover. Price, 50 cents.

Bee-Keeping for Beginners, by Dr. J. P. H. Brown, of Georgia.—A practical and condenst treatise on the honey-bee, giving the best modes of management in order to secure the most profit. 110 pages, bound in paper. Price, 50 cts.

Bee-Keeping for Profit, by Dr. G. L. Tinker.—Revised and enlarged. It details the author's "new system, or how to get the largest yields of comb or extracted honey." 80 pages, illustrated. Price, 25 cents.

Apiary Register, by Thomas G. Newman.—Devotes two pages to a colony. Leather binding. Price, for 50 colonies, $1.00; for 100 colonies, $1.25.

Dr. Howard's Book on Foul Brood.—Gives the McEvoy Treatment and reviews the experiments of others. Price, 25 cents.

Winter Problem in Bee-Keeping, by G. R. Pierce.—Result of 25 years' experience. 30 cts.

Foul Brood Treatment, by Prof. F. R. Cheshire.—Its Cause and Prevention. Price, 10 cts.

Foul Brood, by A. R. Kohnke.—Origin, Development and Cure. Price, 10 cents.

Capons and Caponizing, by Dr. Sawyer, Fanny Field, and others. Illustrated. All about caponizing fowls, and thus how to make the most money in poultry-raising. 64 pages. Price, 20c.

Our Poultry Doctor, or Health in the Poultry Yard and How to Cure Sick Fowls, by Fanny Field.—Everything about Poultry Diseases and their Cure. 64 pages. Price, 20 cents.

Poultry for Market and Poultry for Profit, by Fanny Field.—Tells everything about Poultry Business. 64 pages. Price, 20 cents.

York's Honey Almanac is a neat little 24-page pamphlet especially gotten up with a view to creating a demand for honey. A very effective helper in working up a home market for honey. Prices: A sample for a stamp; 25 copies for 40c; 50 for 60c; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 7.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13@14c; amber, 10@12c; and dark to buckwheat, 9@10c. Extracted white clover and basswood, 8@9c; amber, 7@8c; dark, 6@7c. Beeswax, 27c.
R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth.

KANSAS CITY, Nov. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

BUFFALO, Nov. 6.—Actual supplies in Buffalo are smallest for several seasons at this date. Strictly fancy 1-lb. comb, active, 15c; No. 1 and choice, 13@14c; dark, buckwheat, etc., 8@12c, as to grade. Beeswax, 27@28c. BATTERSON & Co.

SAN FRANCISCO, Oct. 25.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7¼@7¾, light amber, 6½@7c; amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Nov. 7.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

We are pleased to note that our market continues in splendid condition. While the supply is light, yet, owing to the high prices, it seems to be quite equal to the demand. Later on when the trade realizes the shortage more thoroly the demand undoubtedly will be much better.
BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices. White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12@13c; No. 1 amber, 11@12c; fancy dark, 9@10c; White extracted, 8@8½c; amber, 7@7½c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A13t 163 So. Water St., Chicago, Ill.

WANTED.—Extracted honey all kinds; mail sample and price expected delivered at Cincinnati. I pay spot cash on delivery.
C. H. W. WEBER,
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40Atf 2146-48 Central Ave., Cincinnati, O.

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Hamilton, Hancock Co., Ill.

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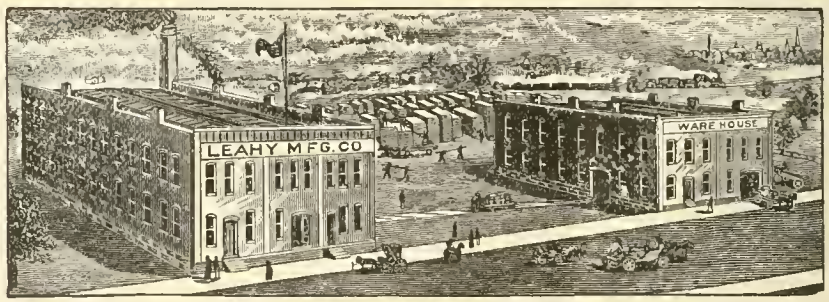

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HONEY-JARS.

1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

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GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., NOVEMBER 23, 1899. No. 47.

CONTRIBUTED ARTICLES

An Apiary and Bee-Keeping in South Dakota.

BY JAMES M. HOBBS.

BEE-KEEPING in our new State is also a new industry. The illustration herewith represents my summer and winter home-apiary and this is the eighth year I have wintered my bees as shown in the picture, and with good results.

I work for comb honey only, and use 1½-story, 8-frame Langstroth hives.

The honey-flow this year was not as good as in previous years, as I got only about 45 pounds per colony on an average, fall count. Some colonies produced as high as 130 pounds of comb honey. We usually get 50 to 75 pounds on the average. Our principal flow is from sweet clover, which is abundant here; also alfalfa.

My method of increase of colonies is natural swarming. I have no clipt queens. I have practiced this method for 20 years, and I will say that I have had only *one* swarm to abscond in all that time, and for eight years no swarm has settled over four feet from the ground. I could sit in a chair and hive them. At some future time I will describe my method. Yankton Co., S. Dak., Oct. 17.

Bee-Hive Ventilation During the Winter Months.

BY G. M. DOOLITTLE.

AS I am fixing the bee-hives these days (the forepart of November), as to the matter of covering over and around the frames, my mind chanced to wander over the past, and trace the way in which I had been led up to where I am to-day as to the subject of ventilation of bee-hives, and in so thinking it came to me that it might not be amiss to tell the readers of the American Bee Journal something about it.

Among many pleasant recollections, the bees are ever foremost, and at 10 years of age I was an anxious watcher of these little creatures, of which father had from 20 to 40 colonies, according as the seasons were good or poor. These were kept in what was then known as the "Weeks patent hive," a hive which had the bottom-board attacht to it with wire hooks and staples, and with a button so arranged that, for winter, the bottom was allowed to hang suspended an inch below the hive, while in summer the button was so turned as to bring the bottom-board tight to the bottom of the hive, except the entrance. With this hive father had poor success wintering bees, while a neighbor wintered his safely with a hive closed tight at the bottom and a two-inch auger-hole at the top. This success of the neighbor, and father's poor success, caused him to fasten the bottom-boards of the Weeks hive in winter, or rather leave them during the winter just as they were in summer, while the holes in the top, thru which the bees had access to the surplus apartment, were opened, and the surplus chamber was filled with some old garments, carpets, hay or straw, or something of the kind, just what came most handy. Fixt in this way we had very little trouble in wintering the bees thereafter.

The recollection of this matter caused me to believe that "upward ventilation," as it is often termed, was the proper kind of ventilation to give, when the bees were wintered on the summer stands.

Soon after this, nearly all the bees in these parts died of that dread disease, foul brood, and no more were kept in the family until the year 1869, when I purchast two colonies, thus laying the foundation of my present apiary.

At that time (1869) there were plenty of bees kept all about here in box-hives, very many of which were raised on half-inch blocks at the bottom all around, that being something similar to the old method of ventilation of the Weeks

Home-Apiary of Mr. James M. Hobbs, of Yankton Co., South Dakota.

hive, and quite nearly representing the rim one inch deep recommended by some of the writers of a decade or so ago. But I adopted the plan of "upward ventilation," as it was then termed, altho I now look at it as practically no ventilation at all, in the sense of a draft of air, unless we can call it ventilation which we enjoy when sleeping under our warm comforters on a cold winter's night.

Soon after I commenced to use this upward-ventilation plan, as it was termed, there came a series of winters in which the box-hive men lost all the bees they had, while I met with scarcely any loss, and the bees in the woods seemed to be as numerous as ever. This set me to studying again, and by looking at the bees in their natural home in the hollow tree, I found that the hollow was composed of partly decayed wood, especially above the combs. Thus, in winter, the moisture from the bees passes into the decayed wood which surrounds them, and is expelled each summer by the heat. In this we had something pointing toward the porous covering which many of our best apiarists have used for years with such good success, and also toward the chaff hives used of late years with equally good success. With these chaff hives, and the slow change of air taking place thru the chaff or sawdust cushions, we have something even better than the home Nature provided for the bee; and with hives so arranged there need be very little provision for ventilation at the bottom, for, should the entrance become obstructed with snow, ice, or dead bees, so that all air is cut off from the bottom, the bees can secure all the ventilation they require thru the chaff sides and cushion from above, thus passing nicely along until a warm spell occurs, when they can clear their doorway.

After years of experience with chaff hives, used in connection with sawdust cushions over the top of the brood-chamber, I have become convinced that there is nothing better along the line of hives for wintering bees on the summer stands than this, and I would hereby ask every reader of the American Bee Journal who is at all skeptical on this point to prepare ten colonies in chaff hives with sawdust cushions as above, taking ten others as nearly like them as possible (except that they be left in ordinary hives with lower ventilation), and see if all skepticism does not vanish at the end of three or four years. I even use these chaff hives with sawdust cushions to quite an extent for cellar-wintering, and think that they have an advantage even there.

In connection with ventilation thru porous covering, some think that, as all the moisture is carried off, the bees need water given them to keep them in a healthy condition; but I feel that such is wholly unnecessary, for the reason that I believe it a bad plan for the bees to breed much if any before the middle of March to the middle of April, according to the season and the locality, and bees need no water in the winter season except for breeding purposes. Colonies which commence breeding to any great extent earlier than this are not as good, as a rule, on the first of June as those of the same strength as to number of bees that do not commence to rear brood before the first of April.

To avoid too early brood-rearing it is a great help where they are packt in chaff along this line; for the sun's rays will not arouse the bees to activity, such activity causing brood-rearing every time it shines on them for a little while during the middle of the day when the air is cool otherwise. This early breeding causes a much greater consumption of honey and a far greater loss of bees without a corresponding benefit. When it comes steady warm weather two bees are reared for one old one lost, while in early spring or late winter two old bees are lost to where one young bee is reared; hence anything that causes early breeding becomes a loss to us both in bees and in stores.

Only as we look after all of these items which have a direct bearing on our pursuit, can we expect to become the most efficient in our calling in life.

Onondaga Co., N. Y.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 726.]

Mr. G. M. Doolittle, of New York, then delivered the following address on

The Possibilities of Bee-Keeping.

There are some who think we have arrived at all the possibilities of bee-keeping, but I do not think so. I am going to prepare what I have to say by reading to you out of God's Holy Word. I will read from the book of Revelation, the 1st chapter, from the 9th to the 19th verse; also from the 3rd chapter, 7th to 13th verse. I am not going to preach a sermon to you to-night, but as something to guide our thoughts I desire to take a text of three words found in the 8th verse of the 3rd chapter—"A little strength."

As John goes back in thought he sees the Son of Man stilling the waves, healing the sick and raising the dead. He now sees more power in Him than when on earth, and as he sees the power he hears Him saying, "Behold, I have set before thee an open door because thou hast a little strength." Of course, this was meant in a spiritual sense, but I do not think I shall be much out of place if I apply it to bee-keeping. *All power* comes from *God*, and we could not keep bees without that power.

I am reminded of a Scotch girl. There was a high mountainous pass where occasionally a man went down. This girl was impressed to build a bridge over it. She went out among the people, and the result was that a bridge was built. The people were so rejoiced that they wanted to name it after her; but she said, "No! If you must name it, call it 'God and Us.' God gave the power and we carried out His purpose." In this nation, whence comes all this power? We see railroads and electric cars going in all directions; the telegraph, telephone, etc. Whence came the power that brought these about? Does such power come to heathen nations? *No!* it comes from God to Christian nations.

Now, bring it down to the bee; if we have "a little strength" to grasp that idea, "God with us," there is set before us "an open door," and we can accomplish much with the bee. If I have a *little* strength the promise is to *me*. Do I wish to be a Dr. Miller, Mason, Root, Hutchinson, Elwood? The "little strength," with "the open door," may enable me to equal if not excel them.

There is a story of a little boy who saw some apples, but they were out of his reach. A little further on he saw a larger boy, but *he* could not quite reach them; so the smaller boy climbed upon his shoulders, and then he could reach them. "If at first you don't succeed, try, try again." A large block of granite was put up for sale one day. Michael Angelo was at the sale. He thought he would buy it. It sold for an enormous sum, but Angelo took it. Some one askt him, "Why did you pay so much?" His reply was, "I saw an angel in the block, and I am going to liberate it." He did so, and became famous for "the angel" in statuary.

Have you tried to understand your locality, and failed? If you do not understand your locality you fail of the best success. When you see your bees coming in with pollen in the spring, follow the bees. Then when a load of honey comes in follow it to its source. The bee-keeper must follow his pursuit to perfection. I told the following story at the National convention in Canada:

Henry Clay wanted the presidency. He came to an old friend and said to him, "Are you going to help me now?" The answer was, "No; *you* failed *me* once."

Clay saw he was not going to make anything by that, so he said, "John, do you remember the old days?" John said, "Yes." "Do you remember the old gun?" "Yes." (It was an old flintlock.) "Did the gun ever fail you, John?" "Yes, it failed me once when I needed it most." "What did you do? Throw it away?" "No, I pickt the

flint and tried again." "Can you not try *me* again, John?" "Yes, I will pick the flint and try you again." We must pick the flint and try again if we fail.

Do we want strong colonies with no swarming and much comb honey? There are those here who do not believe we can have strong colonies and much honey without swarming. I believe we shall yet have these things because some have "a little strength" to work in that direction. Now, there is no such thing as failure, if we have "a little strength," because there is set before us "an open door."

I love to read Jeremiah, in the 18th chapter. When he was about to get discouraged God sent him down to the potter's house. He saw the potter molding the clay, and just as the potter had it all molded it dropt and went all to pieces. Jeremiah thought it was ruined, but the potter gathered up the pieces of clay and molded it again into a perfect vessel fit for the Master's use. Have you tried rearing queens and failed? What are you going to do? Are you going to give it up? The queen that cannot be "brought to time" in breeding is not the queen for me. I have been working to bring queens to perfection by giving the maximum number of bees just at the time of the honey harvest.

I am requested to tell the anecdote I told at the Buffalo convention of this association two years ago. A certain darkey often went to market, but one time it was different—his wife went with him this time. He cried at the top of his voice, "'TATOES, 'TATOES, 'TATOES!" His wife said, "Keep still, darling, you will wake all the people up." He said to her, "That is what I want to do;" and again he cried, "'TATOES, 'TATOES, 'TATOES!" That is what *we* want to do—wake bee-keepers up about securing a large force of bees in time for the harvest.

Do you wish to know about putting on and taking off sections, doing it at just the right time? Then use "a little strength" along that line.

When we entered the bee-keeping ranks we pledged ourselves by thus entering to do our best. Some may not believe we did so. I am reminded of our great ocean steamers. In the middle of the Atlantic one of the stokers was askt, "Are the other stokers all working? Is the vessel going right?" He answered, "I am not the captain, but by taking this place I pledged myself to do the best I could. I *am* captain of this shovel." He did his part faithfully, and the vessel landed safely in Liverpool.

Have you tried wintering bees and failed? During the winter of 1881-82 three-fourths of all the bees in the United States died. There has been progress in wintering since then, and yet we are not perfect. August is the time to prepare bees for winter. See that each colony has a good queen, bees and food enough. If you wait until December, and then write to Dr. Miller or Dr. Mason about preparing your bees for winter, you will be something like the old preacher whose wife said to him one cold Sunday, "Had you not better put on a thicker pair of pants?" The pair he put on had hung away all summer in the attic, and the wasps had built a nest in the roomy part of them. After getting into the pulpit he commenced to read the 103rd Psalm: "'Bless the Lord oh my soul'—oh, what a sting! 'Bless the Lord oh my soul, and forget not all his benefits'—Ge-whit-aker, what a sting! I'll tell you what it is, brethren, the word of the Lord is in my mouth, but the devil's in these breeches."

If we put off preparing for winter until December the word of the Lord may be in our mouths, but failure will be ours. There is no time for sitting around listening to idle gossip.

A sailing vessel was stranded off the coast of South America; a signal of distress was run up, and a steamer saw it and askt what was needed. "Water, *fresh water*," was the reply. "Do you not know you are at the mouth of the Amazon? Let down your buckets and you will find plenty." My friends, we are always in the Amazon of bee-keeping; let down your buckets and dip the fresh water up.

Moses saw the burning bush and put his shoes from off his feet. There are many burning bushes about the bee-keeping pursuit, but he only sees who "puts the shoes from off his feet." After seeing the possibilities we are to go out and tell it to the world, for there are no possibilities in selfishness.

Biddy said to Pat one morning, "Go and kill the rooster." He came to the door with it under his arm, took it by the head, gave it a few twists, and sent it floundering into the kitchen with the blood spurting about.

"Pat, didn't I tell you to kill the rooster?" yelled Biddy. "Faith," said Pat, "it's dead, but it don't know it." The selfish person may go floundering about, but is dead to the possibilities of apiculture. The first thing for us to do after learning something useful is to go out and tell it to the world. There are no possibilities of a useful thing dying with ourselves because *we* only wisht to profit by it. We are to spend ourselves for others if we would attain to the highest possibilities, as such expending will react on us.

You remember the old metaphor,

> "There was a man, his neighbors thought him mad,
> The more he gave away the more he had."

And so it is with us, if we try to make the apicultural world better for our having lived in it. The Good Book says, "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty."

Every time we tell a thing the possibilities are greater thru the reflex action that comes to us, and so by thus telling we keep on growing to the *highest* possibilities.

It is said that Capt. Cook, when he sailed around the world, planted English flowers at every place he landed, and so he has, thru these flowers, been growing ever since.

No, no, brothers and sisters, bee-keeping is not ours. We may think we have the right to hug things up and keep them ourselves, but it is not so. Apiculture of to-day is what it is because of those who came before us.

Two monkeys discover an apple below a high bank in the water, with the limb of a tree overhanging. They climb the tree; the first attaches himself to the limb, and the second attaches himself to the first monkey, but they are too short. A third came, but still they could not reach it. Along came the fourth, and taking in the situation ran up the tree, over the limb, and down the three suspended monkeys and reacht the apple. Will any bee-keeper present tell me that the apple belonged to the fourth monkey? The apiarists of the past are the "mother breasts" that furnisht the nourishment for the possibilities of the present. The thought of yesterday is but the inspiration of to-day. He only lives *wisely* who lives for the possibilities of the future—possibilities to generations yet unborn. Others of us instead of being selfish are telling things that we don't know; we get a little bee-keeping—go out and write for the papers and make lots of noise.

An old darkey was plodding and splashing homeward thru a midnight thunderstorm. The winds were blowing, and the rain was sheeting down. Every other moment a flash of lightning slasht the heavens briefly like a knife of fire. Then followed the thunders, rolling crash on crash, as if the very roots of the hills were being torn from their home in the ages. The lightning would last but a second, and then leave the poor old darkey in blacker night than ever. But the thunders were incessant; their rollings were without end. At last the old darkey became frightened, and, following a thundrous peal of unusual horror, he plumpt down on his knees in the mud and began to pray, "Oh! Lord," he cried, "far be it from one so humble as I to tell Thee thy business. But if it's all the same to Thee, an' doan't pester Thee or change too much Thy infinite plans, couldn't this storm be managed to give us a leetle less noise an' a leetle mo' light? Amen!"

And so let us, when we do anything, do it for the purpose of disseminating light, not to make a noise.

Again, others of us work with no definite object in view. We should work and toil for a purpose. John Chinaman was hacking away on a stick, and a neighbor askt him, "What are you making, John?" He replied, "It may be a god or it may be a bedstead, for all I know." We experiment so loosely that, at the finish, if askt the result, we can only reply, "It may be a god or it may be a bedstead, for all I know." Let us work so perfectly that we *know* what we are doing, so that we may hear the Master say, "Because thou hast 'a little strength' I have set before thee 'an open door.'"

Mind has not grapst the possibilities which are before us if we work with the "little strength" we have. Let us not deceive ourselves. This "little strength" must be used intelligently, and for the good of the whole—not for just *me*, if "behold, I have set before thee an open door" of possibilities is to be realized. Understanding it, are *you* ready to venture? If so, the *possibilities* are for you. There is no chance of a failure. The *power* is with our "*little strength*." The accomplishments of the past are nothing to what there is in store for the apicultural world if we but enter the "open door." Will we do it?

A certain explorer, with his guide, was traveling up the Alps. They came to a certain place where the explorer could see no place to stop. The guide swung himself into a crevice of the rock and put out his hand; seeing it the ex-

plorer said, "If the hand fail I fall into the abyss below. Not to go forward will lose to me the sights for which I came." Assuringly the guide said, "That hand never lost a man."

I fear I have not made this as plain as I might. I have tried, but fear I have failed thru my inability to express myself, but to him that hath "*a little strength*," the Master saith, "He that shutteth and no man openeth, and He that openeth and no man shutteth," "because thou hast "*a little strength*, behold *I* have set before *thee* an open door, and no man can shut it."

In conclusion, allow me to say that that hand—that all-powerful hand of the Master—coupled with our hands having a *little* apicultural strength "that hand *never lost a man!*"

G. M. DOOLITTLE.

Following the address by Mr. Doolittle, Prof. H. W. Wiley, chief chemist for the United States Department of Agriculture, Washington, D. C., spoke as follows on

Food Value of Honey—Its Adulteration and Analyses.

A great poet, as well as one who had a keen insight into the scientific laws of nature, said, about one hundred years ago, in language which I shall venture to translate—

> "He who knows not all that has happened
> In three thousand years, will never
> See the light nor have experience
> Even should he live forever."

This statement of Goethe is true, also, in matters connected with honey.

It seems to me, therefore, in discussing the subject of honey as a food, that it would be wise to go back over the pages of history and see what uses were made of this substance during the past three thousand years, or even longer. If you will indulge me, therefore, I will preface what I have to say by a few extracts taken from historical pages, relating to honey and its uses. We ought to know what has been done in three thousand years, but I do not propose to take three thousand minutes to tell you.

EARLY HISTORY.—The tribes of men that live solely, or almost so, on flesh use neither salt nor sweets. The transition from flesh-eating to plant-eating in the early history of all nations is attended with the consumption of salt and sweets. The word sweet is common to all dominant languages. In Sanscrit it first occurs, thousands of years old, as *svadu*, to make sweet; ydus, Greek; snovis, Latin, etc. The use of honey in early historical times was connected with religious rites, chiefly because the fermented honey-water was supposed to contain a spirit powerful, and needing to be propitiated.

Wine or beer made from honey was known in the earliest historical times, known in Sanskrit as *madhu*, and in Greek as *meu*, and in German as *meth*.

Bee-culture was unknown to many early nations which valued wild honey. It is evident that Homer would have mentioned bee-culture had it been known to the Greeks in his time. Homer frequently mentions honey and its uses, but never suggests that men have anything to do with its production. Homer, in the 9th book of the Odyssey, calls wine the "the red honey of the grape." A "land full of honey" to the ancient writers did not mean the ideal land full of milk and honey, but a wilderness where the bees workt undisturbed in accumulating their stores.

While some attempts were made before the Christian era to increase the production of honey by man's aid, no true system of bee-culture can be said to have existed 2,000 years ago. This is plainly evident from a perusal of that book of the Georgics devoted by Virgil to bees and honey. During Pliny's life (died 79, A. D.) men learned to build rude hives, and even placed in them windows of isinglass in order to watch the bees at their work. Pliny had some remarkable ideas in regard to the propagation of bees. He states that if the carcasses of young steers be covered with dung, Nature will change a portion of the steer's body into bees. (Book XI.) This idea probably arose from the fable of Aristous, the first bee-keeper who helpt to compass the death of Eurydice. He was punisht for this by having taken from him all his bees. He was advised by Proteus to supplicate the gods in a sacrifice of bullocks. He was delighted to see arise from their carcasses a new supply of bees.

Aristotle, who lived 350 years B. C., states that the bees make the wax, but gather the honey from Heaven—dew. Even up to the time of Virgil, and after, the ancient writers had no notion of the existence of sugar in flowers, but the honey gathered by the bees was supposed to be a direct gift of Heaven, or, as Virgil describes it, "That gift of Heaven, ethereal honey."

The use of honey in baking is mentioned in the 7th century B. C. At the time of Aristophones the use of honey in the bakeries of Athens was quite common. (444 B. C.) The Athenian honey was very costly. Aristophones says, "I beg thee, friend, use some other honey, spare the Attic which costs four crowns."

Xenophon mentions a poisonous honey which made many of his soldiers ill. Investigations in late years, of honeys produced in the locality described by Xenophon, show that this poisonous principle is derived from the Jimson-weed (Datura stramoniun), of whose flowers the bees are very fond.

In Rome in the earliest times honey was very costly, and it was used only in religious ceremonies and as a medicine. It was supposed to have valuable healing powers. It was only about 170 B. C. that it became cheap enough to be used in baking.

In Cæsar's time honey was used to a considerable extent. Vejanus, a bee-keeper near Falerimer, is said by Varro to have sold annually 10,000 sesterces worth ($650) of honey from a flower-garden of about one acre in extent. His bees probably poacht on his neighbors' preserves.

During the empire, honey merchants and bakers were found in all parts of Rome, and poultry intended for the rich were fattened on honey and ground cereals.

During this period, also, the preservation of fruits in honey was first practiced, and the foundations of a great modern industry laid. The preserving power of honey, however, was not discovered by the Romans, for Herodotus, who lived nearly 500 B. C., says that dead bodies in Eastern countries were preserved from decay by honey and wax.

It is said that the body of Agesipolis, king of Sparta, was preserved and sent home in this manner.

The Egyptians fed their sacred animals, *e. g.*, the crocodile, goose-flesh and honey-cakes, and pictures more than 4,000 years old of bees have been found in Egyptian antiquities. It seems probable, therefore, that the Egyptians were the first to gather honey.

Especially as a medicine honey was largely used in Egypt. In an old Egyptian writing, at least 1500 B. C., have been found numerous recipes for remedies in which honey plays the most important part.

Hippocrates, the celebrated Grecian physician, who lived 450 B. C., describes many remedies in which honey was the chief ingredient, and ascribed to it remarkable curative properties. An ancient fable recites that in thankfulness the bees constructed a hive on his grave, and that honey of miraculous healing properties was produced therein.

Democritus, who was contemporary with Hippocrates, and who lived to be more than a hundred years old, when askt how to attain so green an old age, replied, "Honey within, oil without."

Many curious theories were developt in respect of the curative powers of honey and wine—not perhaps any more absurd than many of the so-called medical theories in vogue at the present time.

Macrobius, 400 A. D., explained the healing power of the mixture by saying that the old wine by reason of its moist nature was warming, while the honey, by reason of its dry nature, was cooling. Pliny, on the other hand, ascribed the good effects to the property of honey which prevents decay.

The early Christian era saw a great impulse given to the production of honey. The souls of the dead were represented as flying to Heaven in the form of bees. Honey became of more general use, and the wax was made into candles for religious uses. The discovery of paraffine has rendered less effective the old Christian legend that God blest the bees as they were sent from Paradise, and that as a consequence no mass should be said without beeswax candles.

Bee-culture spread with great rapidity over Europe during the first millennium of the Christian era. In Spain honey became an article of export in the early centuries. The tithes of the church were paid in honey in many places. In Saxony honey and honey-bees were so abundant that a fire in Messina was extinguisht with honey-bees in 1015. Nuremberg, however, seems to have been the chief center of the German bee-industry. In Russia, Poland and Lithuania immense quantities of honey were produced at this time. A king of one of the Russian provinces was said to have given to the poor honey and honey-wine, while he himself lived on mare's milk.

In the old Indian writings honey is frequently mentioned. The new-born child was welcomed with a religious ceremonial in which honey was the chief material em-

ployed, and the first artificial food of the infant was composed of honey and sourmilk.

In taking honey from a hive the sacred books of the far East prescribed great care, in order that the hive be not injured. The wanton destruction of a hive was regarded as a heinous sin, and one of the 88,000 hells which are conveniently provided in the theology of Brahma and Buddha was set aside especially for sinners of that class.

The cultivation of the sugar-cane, which became generally known at the time of the Crusades, and the discovery of beet-sugar, 150 years ago, have made artificial sweets so cheap that bee-culture no longer, as it did in the middle centuries, controls the market for sweets, and few bee-hives are now found in the European countries where they were abundant 1,000 or 500 years ago.

When we regard honey as food, of course we recognize that it occupies the same position as sugar or any other soluble carbohydrate.

I have been much interested in what I have heard to-night about honey as a food, especially in the comparisons made between honey and butter. I have not time to give the analyses of honey in comparison with other food, as I had intended. While honey may supply the place of starch or

—From Gleanings in Bee-Culture.

Prof. H. W. Wiley.

butter in the animal economy, it cannot supply the place of protein. Therefore, honey and meat cannot be compared as articles of diet, since they belong to entirely different classes of foods. Man can live by bread alone, altho the Good Book says he cannot.

Honey can supply heat and support energy, but it cannot nourish tissues containing nitrogen, without the help of some other kinds of nourishment, as, for instance, eggs, beans, lean meat, milk and bread.

It is very properly said that honey is one of the most easily digested foods of any class. If we eat starch it must first be converted into sugar before it undergoes the final processes of digestion. While starch is just as nourishing as honey, it must first undergo this preliminary fermentation before it becomes useful as a food.

A soldier must have something to eat on the march, something concentrated and quickly assimilable. While he is not nourisht by sugar alone, yet sugar or honey furnishes a condenst emergency ration of the greatest value.

Among rice-eating nations, the Chinese and Japanese, for instance, can endure long working hours without fatigue. This shows that a food very rich in carbohydrate can support muscular vigor.

The pusher of the jinriksha will go longer distances than many a flesh-eating laborer could possibly cover. Rice is a nourishing food, because it supplies carbohydrates. Honey is a food of a similar kind.

I will admit that to many people honey is a luxury. We can buy sugar that contains no water for five cents a pound. Honey contains water—we do not care to pay for water, which is not regarded as a food of commercial importance. Sugar has made sweets so cheap that honey is not in so great demand as formerly, and yet honey is so cheap that it can no longer be regarded as a luxury.

When I was a young man, and trying to get a little education, I was anxious to get into Switzerland, not so much to get learning, but to get honey. But what I got there was American glucose. I didn't see a bee-hive while there. If you have a variety of bees that can make honey out of snow, take them to Switzerland; they would find there an inexhaustible supply of the raw material.

It is surprising what a rich country we have—what an amount of luxuries we have! Most of us can afford to have honey for breakfast, and we would all be healthier if we would eat more honey and less meat at our matutinal meals.

It is a rare thing to find honey on a hotel table, and if you do, it's glucose!

I will dwell only a few minutes on the third part of my subject, and that is the adulteration of honey. I can add nothing to the remarks that have been made on this subject, but it is an important one. If we could stop the adulterations there would be no trouble in getting a good price for our honey, and people would eat far greater quantities of it did they feel certain that it was genuine.

I do not believe in prohibition of any kind. I believe in man being a free moral agent. If Mary Walker wants to wear trousers, let her wear them. Some one in the Good Book said, "If meat make my brother to offend, I will eat no flesh while the world standeth." I would not go so far as that, but if we are to be total abstainers it should be voluntarily, and not at the mandate of the law. We all have the same rights in what we should wear, eat and drink.

Butter has no more right in the market than oleomargarine, but oleomargarine has no right on the market as butter. If I were going on a distant journey I would take oleomargarine, for it is harder than butter, and would keep better. But when I buy butter I don't want to buy oleomargarine. When I buy honey I don't want to buy glucose.

I have heard speeches against food adulterations that have done more harm than good, because of their intemperate statements. I was once askt, "What is the extent of the adulterations of food?" I answered, "It is difficult to give the exact figures, but I think at some time or other, and in some country or other, about 90 percent of all human foods have been adulterated. But the actual existing amount of adulteration is probably less than five percent." Well, the newspapers reported that Dr. Wiley had stated that 90 percent of all foods on the market were adulterated. Well, that alleged statement was "sweeter than honey" to Germany and France. It was copied in all the trade and agrarian journals of those countries as a reason for excluding American food products from their markets. On any other subject extravagant statements do more harm than good.

I hope to see the day when we shall have a national law and State laws, regulating the manufacture and sale of adulterated foods; when concealed adulterations of food products will be a criminal offence, and the "little strength" we have now in that direction be grown into a national power, protecting industry and securing honest markets for its fruits. In the present condition of affairs one cannot be certain of the composition of the many attractive dishes a well-spread table offers him. He hesitates before partaking of the feast, no matter how tempting the scene may be. The one question he propounds to himself has been well put by the poet who pertinently asks—

"I WONDER WHAT'S IN IT."

We sit at a table delightfully spread,
And teeming with good things to eat,
And daintily finger the cream-tinted bread
Just needing to make it complete
A film of the butter so yellow and sweet,
Well suited to make every minute
A dream of delight; and yet, while we eat,
We cannot help asking, "What's in it?"

O maybe this bread contains alum and chalk,
Or sawdust chopt up very fine;
Or gypsum in powder, about which they talk,
Terra alba just out of the mine.
And our faith in this butter is apt to be weak,

For we haven't a good place to pin it,
Annatto's so yellow and beef fat so sleek—
O I wish I COULD know what is in it.

Ah! be certain you know what is in it,
'Tis a question in place every minute.
Oh! how happy I'd be could only I see,
With certainty, all that is in it.

The pepper, perhaps, contains cocoanut shells,
And the mustard is cotton-seed meal;
The coffee, in sooth, of baked chicory smells,
And the terrapin tastes like roast veal.
The wine which you drink never heard of a grape,
But of tannin and coal-tar is made,
And you could not be certain, except for their shape,
That the eggs by a chicken were laid.
And the salad which bears such an innocent look,
And whispers of fields that are green,
Is covered with germs, each armed with a hook
To grapple with liver and spleen.
No matter how tired, and hungry, and dry;
The banquet how fine; don't begin it
Till you think of the past, and the future, and sigh,
"O I wonder, I wonder what's in it."

And the preacher who prates of the glory that waits
On the saints, and asks, "Have you seen it?"
And tells you how hot it will be for the sot
And the sinner, at last—does he mean it?
The political boss who asks for your vote,
And promises not to forget it,
When landed at last in a place of some note,
Don't you think you'll surely regret it?
And the maid of your choice, with the heavenly voice,
Whom you've loved for a month, if not longer,
Perhaps has said "Yes," and it's time to rejoice,
And foster the faith that grows stronger.
But that true heart, so dear, O you tremble with fear,
And doubt when you struggle to win it;
And now that it's yours, I beg do not jeer,
When I ask, "Are you certain what's in it?"

H. W. WILEY.

The convention then adjourned until 9:30 a.m. the next day.

[Continued next week.]

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

PURE-FOOD LEGISLATION.

A grandly notable paper deeply concerning all mankind, and on a subject outrankt by very few possible topics, is E. T. Abbott's paper on pure-food legislation. Even if it isn't *quite* true that it outranks "expansion" and "currency," that indication of the writer's enthusiasm can easily be forgiven. No harm to remember, however, that legislation on expansion and currency is practically self-enforcing in most cases, while the best imaginable pure-food law safely on the books would only be one short step. Enforcement would be the long step. All honor to Mr. Abbott for his right stand for the principle—"benefits *for all*," and no sly favors or tricks. Our own people have not been in the past quite clear-skirted of tricks. To get legislative bodies to pass what seemed to be a pure-food law, but which would turn out to be a law to prevent selling under its own name, or even producing, sugar-honey, was a trick in high repute during the sugar-honey flurry. (Page 660.)

MR. THEILMANN AND THE DICKEL THEORY.

In Comrade Theilmann's experiments, page 643, where he continually gets a few drones hard to account for, there is another explanation possible besides the one he is steering for. It may be that queens often lay an unfecundated egg (machine drops stitches) in ordinary laying, and that these are seldom noticed because usually the bees leave them to perish instead of developing them. If the bees can develop one sex just as well as the other of the same egg, then the *proportion* of 20 drones to 2,500 workers looks curious for a case where drones are earnestly desired. It would look more like it to see 500 drones or more.

MR. PETTIT'S APIARY.

Mr. Pettit's apiary, which opens out No. 41, looks like business—business first and beauty second—not business first and beauty never thought of, as some apiaries appear. It evidently belongs to the close-order class of apiaries—worrisome to the whim of groupists and open-door folks, who shiver when they contemplate the chance of a young queen's getting bewildered and lost. But Mr. P. and his clan would shiver the rather at walking a quarter-mile with a load when a few rods would answer as well.

A KINK IN RETAILING HONEY.

About the very important matter of working up a retail line, Judge Terral, of the Central Texas convention, offers an unusual suggestion—still I guess he's right. Don't seek to sell a *very* large lot to one customer the first time you go round. They'll eat too much, get sick of honey, the unattractive remnant with flies and things in it will lie round time out of mind (just like any other unattractive remnant), and they'll never buy of you again, because, forsooth, they "have some honey." (Page 644.)

WHITE COMB FROM DARK HONEY.

Mr. Aten is not to be wondered at for the indignation with which he denies that ill-tasting, black-insect secretion can be elaborated into delicate white comb, beautifully capt. One would think not, indeed; yet he is almost certainly wrong. Sorry. If he was only right, the scamps who spoil markets by pushing off such stuff would have less success. (Page 645.)

THE TRAP OF APICULTURE.

McLennan's apiary is also one of the close-order kind, but seems to have alternated colors to help bees and queens locate home—good thing as far as it goes. Wonder what it is he's got on the top of so many of the hives—clampt sections all ready to go on, I guess. Captivating story, the way he was captivated and forced to be a bee-keeper. Apiculture is a trap, and man he's a mouse; if he don't want to be caught he'd best not monkey round much.

FALL FEEDING OF BEES.

I guess we can get pretty general agreement upon the saying of C. P. Dadant, page 658, that in the matter of colonies short of stores in the fall, the worst policy of all is to feed stingily, and have them starve to death, after all. And I would add this much further: With *good* stores of their own collection, and left entirely alone, bees will sometimes squeeze thru alive with not more than five or six pounds. Feed them two or three pounds more, and keep them in a flurry a week or so doing it, and I presume the result would be *less* live colonies in the spring. Good idea of his about atmospheric feeders. First invert them over a pan till all that will readily run out has flowed, then put them over the bees.

FREE BOARD AND MUSKMELON HONEY.

That was a remarkable offer Pres. Whitcomb tells of, page 659—free board to the apiarist that would bring his apiary to the melon-fields—but let us see, let us see! Columbus and Joliet have offers out not dissimilar in that one respect. With muskmelons raised by the square mile we ought to be told just what sort of honey muskmelon honey is. I thirst to know.

THE WICKED ADULTERATORS.

And so the adulterators themselves spread the idea that nearly all honey is adulterated, the same (and for the same reason) that "green goods" men spread the report that nearly all paper money is counterfeit. Page 659.

NEAR HIVE-ENTRANCES AND QUEENS.

"No danger of losing a young queen when two hives have entrances six inches apart, if there are *only* two." (Dr. Miller, 662.) I would have hesitated to put it quite as strong as that; but maybe it's right. You know when a young queen comes home, the bees (it has been said) sometimes incline to worry her a little. Might she not in the excitement of the occasion pull away, take wing again, and so get on the wrong door-step, finally?

SECTION-CLEANING MACHINES—"REST IN PEACE."

Yes, yes, those section-cleaning machines our Boss inquires after in editorial note, page 664! Where are they, indeed? The racket they made was like unto the racket of

a chari-vari—and lasted about as long. Well, perhaps the lapboard and queer old knife that have done service so long constitute, after all, a very fair section-cleaning machine.

THE WHOLE-HOGGISH COMMISSION MAN.

Sometimes it's best to throw an old, soiled blanket over repulsive phases of human nature, and just say nothing—would be inclined on some account to do so for that commission man on page 664, but the quiet, confirmed, cheerful, business whole-hoggishness with which he makes a forced sale of two barrels of honey at two cents a pound is bringing sadness into too many humble and worthy homes. What does he care? He's all right, as long as the two cents covers commission and expenses. Guess we had better blow a trumpet before him, and keep blowing it till even his brazen cheek begins to blush.

QUEENS BRED FOR BUSINESS.

O yes, breed queens for business rather than for color. Page 666. (Some may have heard that remark casually dropt before.) But if the breeders ever do, it will be a hard time for those little George Washingtons who cannot tell a lie—hard, anyhow, for those Jim Need-Washingtons who don't like to have lies told to 'em. On the whole, it's rather nice for a man to be able to *see* at once that he has got just what he sent for; and these wise mentors would rob us of this bliss.

A TRIPLET OF AFTERTHINKS.

Dr. Miller's dozen cages of discarded old queens, lying in a pile out in the shade, bathed in a volunteer—ladies' aid society, for instance—and swarming and going back to the cages again once or twice every day, is unique enough to make a fellow smile (and think) if he is not too much bored. Page 667.

I like the temper of Mr. Bownds, page 669, who tells of the bad queens he reared for his own use, and then adds, "What's the matter with me?" Rather more Christian-like than flinging too-angry pot-hooks at somebody else.

Hold on, Mr. Prankard! We "won't believe fish-story, too," if you don't quit telling us that every queen is where she ought to be, in that beautiful Herman apiary. Page 669.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

A Beginner's Questions.

1. How do you tell whether or not the hive is full of honey?

2. When do you take out the honey?

3. Do you take out all the honey at once?

4. Suppose one starts with 14 or 15 colonies of bees, must there be a queen in each hive?

5. How do you get the wax, and how is it purified?

CALIFORNIA.

ANSWERS.—Before answering your questions, let me advise you in the strongest terms, if you have any thought of starting in the bee-business in the spring, to get one or more text-books on bees and make a thoro study of the matter. It is perhaps not putting it too strongly to say that for every colony you start with you can afford to pay a dollar for a text-book, rather than to do without. If you start with 14 or 15 colonies, the careful study of a good text-book may easily make a difference of $14.00 or $15.00 in results. The advice can hardly be made too emphatic, get a good text-book and study it. Now to your questions:

1. With the old-fashioned skeps or box-hives, the common way to decide as to the amount of honey in a hive was to heft it. Every pound of honey, of course, adds just so much to the weight, and by lifting the hive you can gain some idea as to the weight of its contents. You may do the same way with hives of a more modern pattern, but there are better ways. Nearly all modern hives—perhaps it is better to say all modern hives—have movable combs, and you can take out the combs and see how full they are. But you must understand that there are two different apartments that may be in a hive—the brood apartment, and the surplus apartment. Generally no honey is taken from the brood apartment, and it is not very important to know how much honey is in it, only before winter or at such times as bees are gathering nothing, for if the brood-combs should become entirely empty of honey there might be starvation.

The honey taken is from the surplus apartment, and if it is to be extracted, then you can lift out the combs and see whether they are full. If it is comb, all you need to do is to uncover the top and see whether the sections of honey are sealed over.

2. Extracted honey is generally taken from time to time as often as enough combs are filled and sufficiently sealed. Some do not wait for the honey to be sealed, but it is considered better practice to wait until at least two-thirds of the cells are sealed. In such case the honey is thicker and riper. Some of the best bee-keepers do not extract till the close of the honey harvest, having a sufficient number of extracting-combs to allow extra stories to be added as often as needed.

While it is true that for extracted honey it is all the better to leave it on the hive till the close of the season, the same does not hold true for comb honey. The honey may be thicker and richer, but comb honey sells to a large extent on looks, and the whiter it is the better. If left on the hive after it is sealed, the comb gradually becomes darkened, so it is taken off as soon as a super full of sections is sealed over, with perhaps the exception of the corner sections, for if you wait till these are entirely sealed the middle sections will generally become darkened.

3. From what has been said you will see that in some cases all the surplus honey is taken, and in other cases only part. As a rule, however, all the *surplus* honey is removed from the hive at the close of the honey harvest.

4. Yes, each colony must have a queen of its own, so as to lay eggs enough to keep up the population. You might do with only one queen for several colonies by moving her in rotation from one hive to another, but this would be hard on the queen, and the colonies could not be kept strong. The plan is not advised.

5. Formerly there was an annual pruning of the combs, the lower portions of the combs being cut away, and wax was also obtained when colonies were "taken up" or brimstoned. Neither of these plans is now followed in this country, and wax is only obtained from the melting up of defective or broken combs, or of drone-comb, and from the cappings of extracting-combs. You will hardly need to take any wax for six months or more to come, and will have plenty of time to study up the minutiæ of the matter before that time in your text-book. If you start in next spring with 14 or 15 colonies and with no particular knowledge about bees, it is quite possible that by the spring of 1901 you may have the brood-combs of 14 or 15 colonies to melt up into beeswax. Perhaps you may do well to start with a smaller number, increasing your number as you get experience.

Ventilation of Hives.

Mr. C. P. Dadant, on page 675, says, in telling how he places his hives in the cellar:

"We usually take them without cap, or bottom. Our hives are all supplied with straw mats....In the summer we have an enamel cloth between the brood-combs and the straw mat. In the winter the enamel cloth is removed and the mat is laid directly over the frames, and this straw mat is quite sufficient to separate the hives that are piled one upon another."

I have puzzled my head not a little to know how his hives are ventilated. IOWA.

ANSWER.—In the summer-time enamel cloth under the straw mats prevents the bees from propolizing the mats, and when the enamel cloth is removed there is plenty of ventilation thru the mats. Even if a hive with a bottom-board should be set over the mat, the mat is of such thickness that the air from the hive can escape laterally. Unless the entrance of the hive is quite small, very little upward ventilation is needed. Indeed, my hives, when in the cellar, have no upward ventilation, but the wood covers are glued on tight, just as they were on their summer stands. But the entrance is large, 12x2 inches.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

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United States Bee-Keepers' Association.

Organized to advance the pursuit of Apiculture; to promote the interests of bee-keepers; to protect its members; to prevent the adulteration of honey; and to prosecute the dishonest honey-commission men.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. NOVEMBER 23, 1899. NO. 47.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Helping on the Pure-Food Bill.—On page 696 we suggested sending Rev. E. T. Abbott's address on pure-food legislation to members of Congress. Mr. Ariel Wellman, of Rensselaer Co., N. Y., acted on the suggestion, and afterward received the following acknowledgement from Representative A. V. S. Cochrane, to whom was mailed a copy of Mr. Abbott's address as given at the Philadelphia convention, and publisht in this journal:

HUDSON, N. Y., Nov. 2, 1899.

ARIEL WELLMAN, ESQ.—

Dear Sir:—Your letter of Oct. 30 is at hand. Also the markt copy of the American Bee Journal, which I have read with much interest. I am thoroly in sympathy with the ideas there exprest, and certainly shall be glad to avail myself of any opportunity to promote the cause in which you are interested. Sincerely yours,

A. V. S. COCHRANE.

We still have copies of the Bee Journal containing Mr. Abbott's address, and will be pleased to furnish them upon request for the purpose indicated above.

A Cuban Bee-Keepers' Association.—Mr. Harry Howe, now of Cuba, wrote us as follows Nov. 7, about the organization of the first bee-keepers' association in Cuba:

EDITOR YORK:—The office of Dr. James Warner, in Havana, was the place chosen for the organization of the Cuban Bee-Keepers' Association. Among other items of business was the unanimous election to honorary membership of the following: Frank Benton, O. O. Poppleton, E. R. Root, W. Z. Hutchinson, H. E. Hill and George W. York.

Resolutions asking for a foul brood law were past. Section IX of the proposed law requires the inspection of all bees coming into Cuba, and the immediate destruction of those found to be infected with foul brood, without compensation to the owner. The customs inspectors are to notify the foul-brood inspector of all shipments of bees received.

The officers of the new association are: President, Dr. James Warner; Vice President, Padro Cassinona; Secretary, Harry Howe; Treasurer, Juan Ranelo.

The association has good prospects for success, as there are many special problems facing the Cuban bee-keepers which require co-operation for their solution.

HARRY HOWE, *Sec.*

We wish to thank our Cuban friends for the honor conferred upon us, as mentioned in the above. We also bespeak for the new Cuban bee-keepers' organization every possible success, and all the personal profit and enjoyment that comes from the interchange of ideas and the meeting together of those whose interests are so closely allied.

Exportation of Honey, the Australasian Bee-Keeper says, is the most important subject ever brought before bee-keepers, meaning, of course, bee-keepers of Australia. The London market does not take kindly to Australian honey with its very markt flavor, and the editor thinks the British palate has had so much of sweetened liquid that it cannot appreciate a delicate aroma. So the pure article must be sent without any mixing, educating the consumer to know what honey is. J. D. G. Caddan thinks there is a sufficient home market for the best honey, and producers of the dark article that brings only 2½ to 3 cents a pound should give up bee-keeping and take up poultry.

Honey for Bakers is being used more and more, says Editor Hutchinson in the Bee-Keepers' Review; "and the beauty of it is that they cannot use adulterated goods. The least amount of glucose 'spoils the cake.'"

Irritating Effect of Propolis on the Skin.—The perfect impunity with which nearly all bee-keepers handle propolis has caused reports of injury therefrom to be received with some degree of skepticism. Those who have had particles of propolis fly in the eyes know how very irritating it is to the tender membranes of the eye. Is it not reasonable, then, to believe that the skin on some people's hands may be so much more sensitive than common as to make propolis poisonous to them? It is well known that there is a great difference in the sensitiveness of the skin in different persons. Those who can handle poison-ivy as freely as clover, and with as little harm, might be unwilling to believe it poisonous, were it not that so many can give sad testimony to the contrary. A few in this country have reported poisonous effects on the hands and face from propolis when they were scraping sections. Now comes Bonnmere de Chavigny, in Revue Internationale, and says that when he scrapes propolis from frames, supers, etc., with naked hands, markt results follow. Within 24 or 48 hours a redness of the skin appears, with an eruption of slight pustules, sometimes with and sometimes without smarting, these symptoms disappearing in two days or less. The most striking feature in the case is that after the end of a week or two the skin peels off in a disagreeable way, but without pain.

The Extermination of Basswood.—Editor Root says supply manufacturers may yet be obliged to make four-piece sections, from the fact that no other than basswood will do for the one-piece, and that is rapidly disappearing. If lumber could be brought from Canada free of duty, the matter would be different. Mr. Root says:

"The supply-manufacturer has been blamed for killing the goose that lays the golden egg. But the goose-killing was commenced first and carried on far more extensively by

furniture-makers. Since there has been such a sharp advance in the price of lumber, especially of pine, basswood has been used by planing-mills for regular house-building purposes. It is still cheaper than pine; and contractors, in order to meet old figures, have been compelled to take a cheaper lumber, with the result that basswood has been taken. Some of the most extensive lumbermen say they can see in our northern forests only about ten years' more supply of this favorite timber. The basswood areas are getting to be more and more scarce, with the result that section-lumber will have in time to be of some other less desirable timber.

"But perhaps you may ask why supply-manufacturers use this valuable timber when it is so much needed for honey. For the simple reason that the furniture-makers and planing-mills will use it if we do not. What care they for the bee-keeper who desires to produce honey?"

"The Question-Box is approved by Stenog, in Gleanings in Bee-Culture," says the Bee-Keepers' Review, "even if the answers are contradictory." But Editor Hutchinson thinks the contradictory answers give but little light if plain "yes" and "no" without any reasons.

Tin vs. Wood for Honey-Packages.—In Gleanings in Bee-Culture for Nov. 1, Editor Root has this to say in reply to a contributor who seems to disfavor quite strongly the use of tin honey-packages:

"Perhaps the kegs are more convenient for you at your end of the line; but our experience is that nearly all kegs and barrels of honey, by the time they get to Medina, are leaking slightly, and some of them badly. Our honey-man, Mr. Boyden, is completely disgusted with these wooden packages. On the other hand, he says honey in square cans holding 60 pounds usually comes thru in good order, and is much more convenient to sell again, because the packages are smaller, and the honey can be sold in large or small lots.

"There is no doubt at all that kegs are much more convenient for the producer; but they are a great nuisance to the average *buyer;* and in many cases it is the producer who has to pay for the leakage. He in turn becomes disgusted with his honey-man, as he naturally thinks he has misrepresented."

Right you are, Mr. Root. Wooden barrels are too risky to ship liquid honey in; and they hold too large a quantity for many users of honey, unless for large concerns who can take a carload for bakery purposes; and then even *they* prefer to handle it in tin cans.

We notice that scarcely any bee-supply dealer lists wooden barrels nowadays. Why? Because the handy and safer tin can is rapidly replacing the risky "wooden tubs" for shipping honey.

"Fillers" in Bee-Papers.—Editor Leahy, of the Progressive Bee-Keeper, has this "compliment" for convention essays:

"It always lookt to me that the only importance that could be attacht to bee-convention essays was for "fillers," as the ground covered by those essays is practically exhausted thru the bee-journals by the same writers before written for said conventions."

As the American Bee Journal publishes more convention essays or papers than all the rest of the bee-papers combined, of course the suggestion of using "fillers" strikes us the heaviest. But that is all right. We can stand it admirably. Just see what a fine "filler" Prof. Wiley's convention paper is, in this number, and the one by Mr. Doolittle, who is also an editor of the Progressive Bee-Keeper. Then turn back, and look at Mr. Craycraft's essay on bee-keeping in Cuba and Porto Rico; Mr. Abbott's on pure-food legislation; and others that might be named. Pretty fine "fillers," aren't they?

Then turn to the Progressive Bee-Keeper for November, and look at the "story" it is running—five pages of it in that number. Talk about "fillers!" If that isn't a "filler," we give it up. A bee-paper can hardly compete with the excellent story-papers of the present day—but as "fillers" stories may be a necessity for some bee-papers.

Editor Leahy spoke that time without thinking. There are too many of our best bee-keepers who have written essays for conventions, to dub their productions as "fillers," in the sense meant by Mr. Leahy. But in the best sense of the word they are like a big, wholesome dinner to a hungry man—a genuine "filler" and satisfier.

The Weekly Budget

Mr. A. I. Root is cautioned by one of his lady friends—Mrs. F. I. Schuyler—who writes him thus, as reported in Gleanings in Bee-Culture:

"Dear Bro. Root:—I am glad you have quit sending for patent medicine, and taking it to see whether it is good for anything, as I do not think it your duty to become a martyr for the benefit of your readers."

That is a timely caution for Mr. Root, for we understand that some of the "patent medicine" sent out is about 90 percent whiskey, and labeled "Bitters," so as to evade prohibition laws in certain States. It beats all how some men will lie in order to make a dollar. Money is the ruination of many a man. Some will even give their very souls, including their hope of immortality, for only a few paltry dollars. The "Almighty Dollar" is getting to be altogether too mighty.

* * * * *

Francis Joseph, emperor of Austria, has an apiary in his private garden, not far from the windows of his palace, for convenience in observation. The government gives about $12,000 a year for the purpose of developing scientific apiculture. It is worthy of note on the part of the various European governments, that they favor in every way men of talent, rich or poor, not only in bee-culture, but in all the arts and sciences. Even Russia, beginning with Peter the Great, has offered every inducement for artists and artisans to go there to live. The result is, that St. Petersburg is now probably the finest capital in Europe, while less than 200 years ago its site was a dreary bog. The king of Bavaria appropriates annually about $8,000 to promote scientific bee-keeping.—Gleanings in Bee-Culture.

* * * * *

The Thanksgiving Number of the Saturday Evening Post, in its stories, poems, pictures and general articles, will be the most attractive number of the magazine yet issued. In this number Robert W. Chambers has a seasonable out-of-door story, entitled "The Hunter"—the romance of a poacher's pretty daughter. Other features are: Edwin Markham's latest poem, "The Lyric Seer;" "An Electrical Transaction"—a Tale of the Transvaal War by Robert Barr; "At Dawn," by Octave Thanet, and "The Minister's Henhouse," a droll story by C. B. Loomis. Two notable articles in this number are "Lincoln as Candidate and President," by his old friend and political ally, Colonel A. K. McClure, and "Our New Prosperity," by Frank A. Vanderlip, Assistant Secretary of the Treasury. The Thanksgiving number of the Saturday Evening Post will be on all news-stands Nov. 23, at 5 cents a copy. If not convenient to get it there, address the publishers, Curtis Publishing Co., Philadelphia, Pa., enclosing the amount.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

The Premiums offered on page 749 are well worth working for. Look at them.

Do you want a Good Market for your Crop of Honey,

BOTH COMB AND EXTRACTED?

We are in position to handle any quantity, large or small, to better advantage than any other house, for the following reasons:

We deal almost exclusively in honey, giving it our closest attention all the year round.

We keep ourselves thoroly posted as to the result of the crops gathered in the honey-producing States.

We are acquainted with the most desirable trade thruout the country, and know exactly what their wants are.

We know, thru our long experience, the different varieties and qualities of honey; therefore know what we are selling, and no fear of selling fancy stock at the price of a third grade.

We handle by far the bulk of all the honey sent to New York, and our volume of business enables us to make the charges very reasonable.

Why, then, should we not be able to handle your crop to advantage, and do you justice in every respect?

We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

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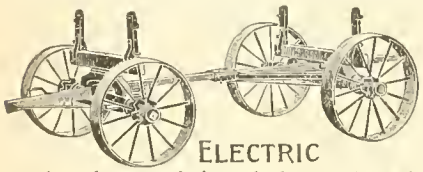
BUY THE BEST.

If you want the best low down wagon you should buy the Electric Handy Wagon. It is the best because it is made of the best material; the best broad tired Electric Wheels; best seasoned white hickory axles; all other wood parts of the best seasoned white oak. The front and



rear hounds are made from the best angle steel, which is neater, stronger and in every way better than wood. Well painted in red and varnisht. Extra length of reach and extra long standards supplied without additional cost when requested. This wagon is guaranteed to carry 4,000 pounds anywhere. Write the Electric Wheel Co., Box 16, Quincy, Ill., for their new catalog, which fully describes this wagon, their famous Electric Wheels, and Electric Feed Cookers. Please mention the Bee Journal.

Glass Honey-Jars!

We have two sizes of clear, flint-glass Jars, No. 1 holding a scant pound of honey, with an opal or white top held on with a screw metal band under which is a rubber to prevent leakage. No. 2 is a rather tall flint-glass jar with tin screw-cap, holding ¾ pound of honey. Both are excellent for retail honey-packages, and are put up in single gross lots. The prices are per gross, f.o.b. Chicago, for the No. 1 jars, $5.25; for the No. 2, $4.25.

We can fill orders promptly for these jars. They give excellent satisfaction, we know, for we have used the same jars for several years.

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BEE-KEEPERS! Let me send you my 64-page CATALOG for 1899.
J. M. Jenkins, Wetumpka, Ala.

Please mention Bee Journal when writing.

Warming Cellars with Oil-Stoves is all right, according to the Bee-Keepers' Review, providing there is provision for carrying ont the foul gases without having them mingle with the air of the cellar. The editor once heated his office in the fall with an oil-stove, but had to quit it on account of headache. There was no chimney to carry off the vitiated air. In cold spells he had warmed his cellar with an oil-stove, and found it to work all right. But he had a hood over the oil-stove connected with the stove pipe in the room above by means of a 2½-inch tin-pipe.

Moving Bees on a Wagon.—A beginner asking in the National Stockman about moving bees on a wagon, is answered in part as follows:

"Just what is the best way to fasten the bees in without fasteniug the air out, depends somewhat on the kind of hive. If it is a box hive, the hive may be turned upside down and wire cloth fastened over the entire opening of the bottom that is now the top, and the hive may be carried in this inverted position. Be sure that you don't lay a hive on its side; the combs would almost be sure to break down. Better prepare your hive for moving at a time when bees are not flying, in the morning or evening. On a cool day when bees do not fly all day, the preparation may be made at any time of day. Give the bees just enough smoke to keep them in the hive till you get them fastened in.

"If the bees are in a movable-comb hive, carry them right side up. If the entrance is large enough to amount to six square inches or more, and if the day is too cool

The Midland Farmer

(SEMI-MONTHLY).

The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

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—in fact they lay double the eggs winter and summer when fed Green Cut Bone.

Mann's New Bone Cutters

cut all hard and soft bones, meat, gristle, &c., fine, fast and without choking and run easy. Clover cut with our **Clover Cutters** helps wonderfully. Mann's Granite Crystal Grit and Feed Trays too. Catalogue FREE.

F. W. MANN CO., Box 77, Milford, Mass.

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SWEET CLOVER

And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	$1.00	$2.25	$4.00
White Clover	80c	1.40	3.00	5.00
Alfalfa Clover	60c	1.20	2.75	5.00
Crimson Clover	55c	.90	2.00	3.50

Prices subject to market changes.

Add 25 cents to your order, for cartage, if wanted by freight.

Your orders are solicited.

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118 Michigan Street, - CHICAGO, ILL.

Root's Column

WE HAVE RECEIVED REQUESTS FOR 945 COPIES GLEANINGS IN BEE-CULTURE FOR NOV. 15.

Did you read our ad. in last week's American Bee Journal? Have you seen a copy of Nov. 15 Gleanings in Bee-Culture? If not, send your request at once. We send a copy free if you mention the American Bee Journal. Sample pages of our A B C of Bee-Culture free if you have never seen it.

THE A. I. ROOT CO.
MEDINA, OHIO.

for bees to fly, say down to 40° or thereabouts, all that is necessary is to close the entrance with wire-cloth. If the day is warm or the entrance small, it is better to take off the cover of the hive and put wire-cloth in its place.

"If you can have your choice just as well, it may be better to take a day when the thermometer stands somewhere from 45° down to 32°, or even a little lower, for on such a day if some of the bees should get out they will not be likely to sting the horses."

Queen-Rearing is discust in Australasian Bee Keeper by H. L. Jones, the man said to have the largest queen-rearing establishment in Australia. He says a large percent of cells will be accepted and workt out in an upper story over a strong colony in a honey-flow, otherwise there must be steady, judicious feeding, and it is then better to have the cells started in strong, queenless colonies, two days later putting them in an upper story between two frames of brood in all stages, this brood having been put in the upper story a day or two previously. He has been fairly successful in getting cells accepted without royal jelly, but better with it. Altho the bees remove all the jelly given, it seems to act as a suggestion to them. A hot knife is needed to cut the cells apart, and if a cell is given to a nucleus at the same time its queen is removed, a cell-protector is used. With larvæ of the right age, the queens batch in a little more than 11 days, and begin laying 10 or 11 days later.

Four Stray Straws in Gleanings in Bee-Culture read as follows:

"Sometimes it happens that, by some means, some nice sections of honey have their faces so daubed as to be almost spoiled. Put a super of such sections over a hive and take away as soon as the bees have had time to lick off the daub.

"I never used a sheet of cloth, as mentioned by Capt. J. E. Hetherington, to cover honey cases in a car, but last week I used newspapers, tacking them lightly on the cases. The cloth has the advantage that it is all in one piece. Perhaps better than either would be manilla paper pasted together.

"Mr. Editor, if you think it for the general good to have your program arranged to shorten up the spelling thruout the whole catalog of words ending in *ue* and *ugh*, I'll try to bear it manfully, even tho it does sometimes jolt me in reading. But, say; won't it leave the word rather short if you drop the final *ugh* from the interjection "ugh?"

"You cannot give the absolute weight of any section of a given size, for one year it will be heavier than another. But I can give the relative weights of 3 kinds of sections for this year: 5676 beeway $4\frac{1}{4}$x$1\frac{7}{8}$ averaged 14 94 ounces; 442 plain 5x$4\frac{1}{4}$x$1\frac{1}{4}$ averaged 13 82 ounces; 345 plain $4\frac{1}{4}$x$4\frac{1}{4}$x-$1\frac{1}{2}$ averaged 13.83 ounces."

Getting Bees Out of Sections is thus discust by F. Greiner in the American Bee-Keeper:

"There are probably but few up-to-date bee-keepers who do not find the escape a very fine thing. I consider it indispensable. But after all I have been obliged to give up its use *on the hive* when removing honey (comb or section honey) *after the honey season is over, on account of our bees perforating or biting the cappings.* When honey is still coming in everything works lovely and that is natural enough. Let us see how it does work:

"When the bees leave a super full of honey they take with them, each and every one, a full load of honey. During the honey flow most bees have their honey sacs filled. Besides, plenty of unsealed honey is in reach; they do not find it necessary to uncap any honey to get their fill. But after honey-secretion has stopt conditions are reverst and one must force the bees out of a full super very quickly or the cappings will suffer. I practice the following method:

"I first remove the cover—honey board or

SUFFERERS FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO, 34 Central Music Hall, CHICAGO.

☞Write at once, stating age, sex, occupation, how troubled, post-office address, and enclose return stamp for immediate reply.

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might hold chickens one day, but Page Poultry Fence makes a permanent hennery.

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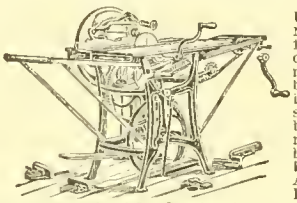

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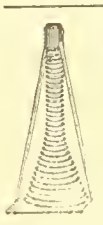

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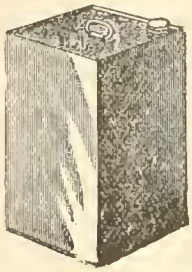

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Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

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Has no Sag in Brood-Frames.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

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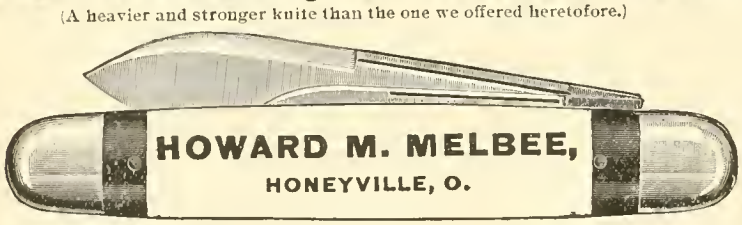
The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO. 118 MICHIGAN ST. CHICAGO, ILL.

quilt—using some smoke; then I lay a wet or damp sheet over the super to be removed; next I grasp the sheet near the center on one side of the hive lift it up slightly, poke the nozzle of the smoker under it and give smoke plentifully, at the same time flapping the sheet. This procedure forces the smoke into all the spaces between the sections and drives the bees down quicker than any other method I have ever tried. I learned this of Mr. Coggshall of lightning fame. As soon as I think the bees are nearly all out, I snatch the super off and give it two or three vigorous shakes which will dislodge the few bees that may have remained. It is a simple method and does not take nearly as long as it takes to tell. The escape-board is now brought into use. The bee-freed supers are stackt up in piles with one escape under it and one on top of each. At dusk the supers are wheeled to the honey-house. The Porter escape is not well suited for use on a stack; any cone escape, letting in direct light, works very much better."

The Long-Ideal Hive has some attention in Australian Bee-Bulletin. "Loyalstone" says:

"Just a word regarding this my favorite hive. I don't ask bee-keepers to adopt it; I gave my experience with it and will have no other hive. I find that 20 frames are quite sufficient for a bee-keeper who knows his business, and only suggested putting another box on top, for bee-keepers who cannot devote proper time in the honey season to attend to their bees. It requires a good deal of experience to work this hive properly."

On the other hand, says "Australian Yankee:" "Let me give a little experience that I had with them last season: The bees built up splendidly in them, the queens occupying 20 frames, and the hives packt with bees (a novice with them would have been jubilant, but I had seen the same thing before), but not a move towards storing surplus honey, only a little along the top-bars of the frames. I extracted this out; the bees slowly filled them to about the same amount. At the same time the bees in 8-frame hives were filling their extracting-supers about every 10 days, thus more than doubling the ones in the long-ideals. Well, I stood it as long as I could, and then I put the bees that were in the long-ideals into 8-frame hives, using a queen excluder, when, 'presto,' they went to work storing surplus as quickly as the others. This was not one hive only, but all the long-ideals I have. I have now cut them all down to 8 frames."

The conclusions of the editor are: "The long-ideal hive is a non-swarming hive, es-

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from a tray full of eggs. That's what the
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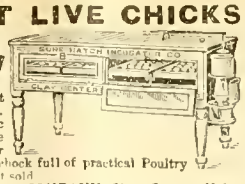
is designed to produce, and it does it with great regularity. Hundreds in use. Automatic throughout. Let us quote you a price laid down at your station. Our catalogue is chock full of practical Poultry Information. It is free—not sold.



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Before placing your order, to send me a list of what you need in

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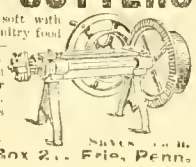
DANDY GREEN BONE CUTTERS
cut all kinds of green bone, hard or soft with adhering meat or gristle, into fine poultry food without choking. Various sizes—hand or power combined or both. Run easy and cut fast. Green cut bone will double the eggs winter or summer. Best winter food known. Makes long and strong layers; makes broiler and ducklings grow. Send for Free Catalogue, prices, &c.



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MUTH'S SQUARE GLASS HONEY-JARS, LANGSTROTH BEE-HIVES, ETC.

Lowest Freight Rates in the country. Send for Catalog.

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40Atf Please mention the Bee Journal

pecially if empty frames be kept near the entrance. Being so large, as a rule, they will not need to be extracted from more than once in a season. In those two items there are great gains to the bee-keeper. But the large box is an expense, probably no more so than two 8 or 10 frame hives. And there is an awkwardness in handling them, the sideways leaning to take a frame out. For several mentioned reasons a few long-ideal hives are an advantage in any apiary, and very useful for out-apiaries."

GENERAL ITEMS

Satisfied with the Results.

I have had very good success with my bees. I lost two colonies last winter, had three left, and have 10 now, and got about 75 pounds of honey. HANNAH E. HESS.
Grand Traverse Co., Mich., Nov. 8.

Crop Almost a Total Failure.

The honey crop was almost a total failure here. Bees secured enough to winter on, provided we cellar them in good shape; but the colonies are very light in bees this fall, owing to the queens not working during the August dearth of honey. We need not be surprised if 50 to 75 percent of the bees perish where wintered on the summer stands without extra protection.
F. KINGSLEY.
Thayer Co., Nebr., Nov. 1.

Bees Did Fairly Well.

The bees have used me fairly well this season, considering that it has been a poor one for our warm-hearted pets, taking the State as a whole. The spring was backward and cool here with plenty of wind. My bees wintered finely, and came out strong in numbers, but they just held their own until June, when the clover bloom came, and wet weather came with it. About June 15 good weather came, and with it the swarming-fever, and swarm they would out of empty supers and almost empty hives. Still, I secured 800 pounds of comb honey of the best quality, from 15 colonies, spring count, and increast to 30, besides having two large swarms take Horace Greeley's advice and "go west." I attempted to go with them, but as I am obliged to wear a No. 10 coarse, leather boot, at times, I was unable to persuade

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

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Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

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Readers of the American Bee Journal will be given a **discount of 20 percent** off above prices, as we have made special arrangements with the Diamond Point Pen Co., to give our patrons this absolutely perfect fountain pen at the wholesale price.

To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

We are offering our readers an absolutely perfect fountain pen which is guaranteed to give entire satisfaction, as the Diamond Point Pen Co. fully warrant and guarantee them absolutely as represented.

If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

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Offer No. 1. We will mail Fountain Pen No. 2110 free as a premium to any one sending us THREE NEW subscribers to the American Bee Journal for one year, with $3.00 to pay for same; or we will club it with the American Bee Journal for one year—both for $2.00.

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A Feed Cooker for $5.00

Many farmers and poultrymen have not used feed cookers in the past because they considered the price too high. To meet this case we have designed the

RELIABLE FEED COOKER AND WATER HEATER.

It is an ideal means for cooking food for stock or poultry and for heating water for scalding hogs. Made of best cast iron, with No. 22 galvanized steel boiler. 20 gal. size $5.—burns wood only. 50 gal. size $12, and 100 gal. size $16, burn either wood or coal. Don't buy until you get our free circulars. RELIABLE INCB. & BROODER CO. Box 2 QUINCY, ILL.

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Best.... Basswood **Extracted Honey ...**

IN BARRELS.

WE have some very fine WISCONSIN BASSWOOD EXTRACTED HONEY in barrels, each holding 360 pounds of honey, which we offer at 9 cents a pound, f.o.b. Chicago, cash with order. Sample by mail, 10 cents. We can ship promptly. Address,

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OUR MOTTO: WELL MANUFACTURED STOCK—QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

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Parties wanting goods before new catalog is issued will please write for quotations. We want every BEE-KEEPER on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

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NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of .. .. Bee-Keepers' Supplies....

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

24 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **24** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

them to travel as fast as the emigrants wisht to, so they whispered a fond farewell about a half mile from the apiary. They neglected to let me know where they settled, but I understand they staked out a claim near Chicago, in order to be near a central market, thus saving transportation charges. They may be able to compete with those glucose fellows.

O. B. GRIFFIN.

Aroostook Co., Maine, Nov. 10.

Season Almost an Utter Failure.

I have a small apiary consisting of 23 colonies which gave me about 275 pounds of comb and extracted honey the past season, with no swarms. Special pains were taken in nursing them continually; I fed them up this fall with 375 pounds of granulated sugar, reducing it to a thick syrup, and added about 30 pounds of extracted honey to the whole; adding this to the more or less storage the colonies already had, they must be in good condition for winter.

For almost utter failures of honey crops, the seasons of 1898 and 1899 surpast anything of the kind known in the history of northwestern Ohio. No one thinks of fall-feeding their colonies here. Having failed two seasons in succession, I am still intensely interested in bee-culture. We hope for better things next year.

M. N. SIMON.

Wood Co., Ohio, Nov. 15.

Origin of Honey-Dew.

In the American Bee Journal of August 31 appeared an article on honey-dew, by C. C. Parsons, which ought to be publisht in all the bee-papers of the United States. It is the first time that I have noticed or read anything on honey-dew from what I consider a right standpoint.

It is true, as Mr. Parsons says, that the consumption of honey has been lessened by the publication of papers in which honey-dew was called "bug-juice," or the secretion of insects. Is it not strange that the human mind will cling so strongly to error, especially in the case of honey-dew, when the truth would be more pleasing and profitable? This is a field in which the "great lights" of the bee-keeping fraternity are invited to enter and investigate. The animal secretion of honey-dew is not the only erroneous idea that has found its way into good company. The sap of all plants contains sugar; starch is also perhaps always present in growing plants, and as starch is convertible into sugar the formation of sugar is probably more rapid at certain times than can be utilized or absorbed into wood fibre, and flows out thru the pores of the plant in the shape of honey-dew. This, however, is a subject of scientific investigation, which has nothing to do with the flow of sugar-water or honey-dew out of the leaves of plants—a fact which is well authenticated, and which almost any one can observe if he wishes to.

Nemaha Co., Nebr. E. H. GABUS.

Honey-Yield in S. E. Minnesota.

In line with the big honey-yields tabulated on page 693, I give the following:

In about 20 years' bee-keeping experience in Fillmore Co., Minn., my average per colony, spring count, has been about 100 pounds of extracted honey. My largest yield was in 1886, with a bunch of 15 colonies; condition in spring, average; yield per colony, 400 pounds of extracted honey. The yield of honey was not phenomenal at any time, but continuous during the entire summer. The first extractiug was towards the latter part of May; last extracting Aug. 29, after which they filled up for winter. Increast the 15 to 40 colonies. The yield of the same bees for the next year was 200 pounds per colony for the lot.

My next best yield was a lot of 16 colonies, in average condition, in the spring of 1896, placed on a farm about nine miles from the place of the first and best yield. The yield per colony for the summer of

1896, was 262½ pounds of extracted honey, and increast to 40 colonies. From these bees in the spring of 1897 I sold 10 colonies at $6 00 per colony, and the yield of balance was 90 pounds to the colony, in a poor year for this locality, and increast to about 50 colonies.

In the spriug of 1898 I sold 35 colonies from them for $200, and from the remainder secured 1,200 pounds of honey, with 30 colonies of bees on hand in the fall.

My average for my whole lot of bees in 1896 was 166 pounds to the colony, spring count.

Last winter all my bee-cellars but two froze badly, and all were wet, but in one, on account of this and their poor condition in the fall, I lost 170 colonies. Of the 120 colonies left, I got about 4,000 pounds of honey, and from 14 which I bought I got about 1,000 pounds, being only about 5,000 pounds from 134 colonies, with an increase to 280 colonies. The past season was the worst in my experience in this country.

Fillmore Co., Minn. M. V. FACEY.

Convention Notice.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

The Sure Hatch Incubator Co., of Clay Center, Nebr., are carrying their advertisement for the new season's business in these columns. We request our subscribers to read it. These people have not been in the incubator business as long as some others of our advertisers in this line, but the high quality of their machines is attested by the success they have made. It is generally supposed that a man or a machine is most successful away from home. If home success is a recommendation, and we believe it is, then the Sure Hatch people have many reasons for congratulation, as their machines are used very extensively in their own county and State. Read the advertisement and then write them; they may have just exactly what you want. Please don't forget to mention the American Bee Journal when writing to them.

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THE MOST ENGAGING BOOK EVER WRITTEN

BY IAN MACLAREN
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A BOOK FOR WHICH THE WORLD HAS WAITED

ITS PLACE IS IN EVERY CHRISTIAN HOME

IT WILL BIND THE BIBLE CLOSER TO THE PEOPLE

IT IS SURE TO EXERT A POWERFUL INFLUENCE FOR GOOD

NOTHING LIKE IT EVER BEFORE WRITTEN

NOT TO BE HAD —IN— BOOK STORES

NEWS AND GOSSIP OF A NEW BOOK ON THE BIBLE have been current in book and Christian circles everywhere for some months In its authorship was to be combined the superb talents and literary abilities of three of the greatest lights in the world of religious literature.

The book is about to appear and on its title page in collaboration as authors are found the names of that most popular of all writers, IAN MACLAREN (Rev. John Watson), together with H. M. WHARTON, D.D., the great Evangelist, and J. WILLIAM BUEL, Ph.D., one of the most prominent and popular writers on Biblical subjects. A MASTERPIECE INDEED must be the book which calls to its creation such a combination of unmatchable talents. IT IS A MASTERPIECE—and it is good news we bring our readers when we tell them that after the most persistent endeavor and the most industrious and earnest negotiations with the Publishers, this paper is one of a syndicate which has secured the entire first edition for distribution among their subscribers, not as a means of winning profits, but to encourage the people to become regular readers, because of the unusual privileges which are offered regular patrons.

The book is entitled "THE GOLDEN MORNING," and while it was intended to be a $5.00 book, and has everything about it—authorship, illustrations, paper, printing and binding—to warrant that price, we have, after many objections and refusals, made terms whereby WE ARE IN POSITION TO OFFER IT TO OUR READERS AT A GREAT REDUCTION. It contains nearly 800 pages and over 500 superb illustrations. It is printed with clear type on coated paper, and is bound in beautifully illuminated covers, with gold and colored stamping.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 7.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13@14c; amber, 10@12c: and dark to buckwheat, 9@10c. Extracted white clover and basswood, 8@9c; amber, 7@8c; dark, 6@7c. Beeswax, 27c.
R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER,
Successor to Chas. F. Muth & Son and A. Muth.

KANSAS CITY, Nov. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

BUFFALO, Nov. 6.—Actual supplies in Buffalo are smallest for several seasons at this date. Strictly fancy 1-lb. comb, active, 15c; No. 1 and choice, 13@14c; dark, buckwheat, etc., 8@12c, as to grade. Beeswax, 27@28c. BATTERSON & Co.

SAN FRANCISCO, Nov. 8.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Nov. 7.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

We are pleased to note that our market continues in splendid condition. While the supply is light, yet, owing to the high prices, it seems to be quite equal to the demand. Later on when the trade realizes the shortage more thoroly the demand undoubtedly will be much better.
BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Oct. 14.—The market is now well supplied with new crop honey and trade is taking hold readily at 14@14½c for fancy white in round lots, with about one cent less for light amber. Dealers are fully satisfied now that the crop is light, and not holding back purchasing any longer for fear of lower prices. White extracted, 8c. PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

CLEVELAND, Oct. 18.—Fancy white, 16c; No. 1 white, 15c; fancy amber, 12@13c; No. 1 amber, 11@12c; fancy dark, 9@10c; White extracted, 8@8½c; amber, 7@7½c. A. B. WILLIAMS & Co.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
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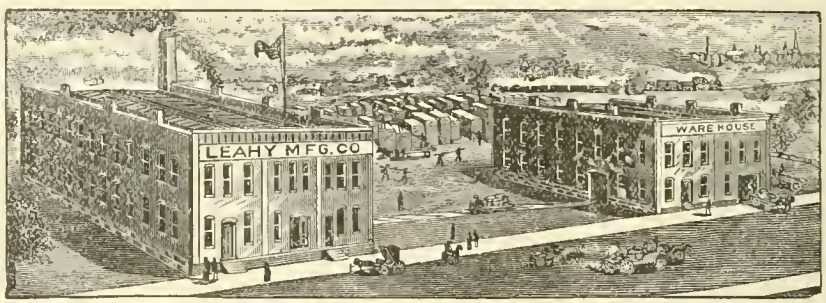

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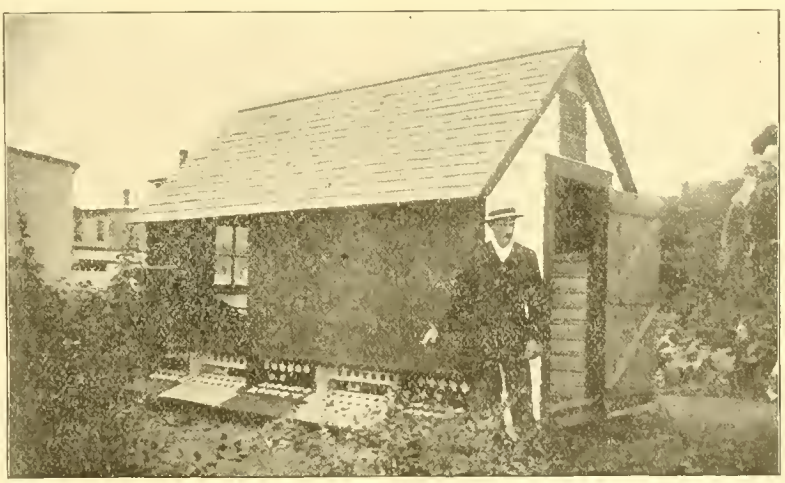
39th YEAR. CHICAGO, ILL., NOVEMBER 30, 1899. No. 48.

CONTRIBUTED ARTICLES

A House-Apiary and Its Management.

BY EDW. S. GOUDGE.

I HAVE a bee-house which I built two years ago, the convenience of which far exceeds what I had expected, as I now manage my bees with about one-quarter of the labor that was formerly necessary. Years ago the idea of a house or shed for the hives was considered, but on account of adverse reports of their advantages in the bee papers and books, I let the matter drop. But in the summer of 1897 my 10 colonies gave me so much work, unpacking and storing away cases, shading the hives, carrying supers, and fixing up for winter, etc.; that I began to contrive some plan to lighten the work, and the bee-house shown in the picture is the result.



House-Apiary of Mr. Edw. S. Goudge, of Nova Scotia.

I now have no winter cases to bother with, such as keeping the covers waterproof, lugging about and storing them away, etc.; no more shade-boards to aggravate me; the supers are kept just behind the hives, where they are always handy; the building is a bee-house, a honey-house, and screen-house, all in one. It protects the hives from the sun, wind and rain, and also keeps the bees snug during cool spells. The supers, when taken off, are stored, comb honey is sorted, and all extracting done right on the spot. A hive can be opened without the hindrance of robber-bees, and other work such as feeding, etc., is done with far less time and labor than if the hives were outside as ordinarily.

The bees become accustomed to the noise of extracting, etc., but I think it best not to disturb them by entering the house after dark, and if I need to go into the building between Nov. 1 and April 1, I take care to do so quietly.

My bee-house was built for 5 colonies only, which number is what I have now, my regular occupation making it unwise to keep more.

I believe that if there is prejudice against bee-houses it is because they are not always planned rightly, which makes all the difference.

In building the house, while aiming at the desired features, I also tried to avoid the undesirable ones. I understood that with bee-houses the danger of losing young queens was great, so I overcame that by not setting the hives too close together, and by making the entrances conspicuously different.

The hives occupy the south half of the building, spare supers, etc., being stored against the opposite wall, about 3 feet back of the hives. There is about 20 inches of space between each two hive, in which I set empty hives ready for swarms when in season. The 5 colonies set in a row about 10 inches back from the wall of the house, and each entrance opens into a separate niche, which is painted so as not to look like any of the others. The hives rest on the floor, and each has its bottom-board, so that a colony can be lifted without the bees spreading over the place. By not having one hive above another, 6 or 8 supers can be added if necessary.

When a swarm is expected from a certain hive, an empty one is put alongside, and setting between two hives its entrance opens on two niches; but only half the entrance is left open, that is, the half nearest to the hive from which the swarm is expected, the other half being closed with a block made for the purpose. When no swarms are to be attended to, all the half entrances are closed with blocks.

I control the swarms by having the queens clipt, and when the swarm is in the air the queen is secured in a small cage, and a trap (having two escaping cones), made to adjust to the entrance of the colony that swarmed, prevents any bees going back, but allows those that wish, to go out.

When the swarm commences to return and crowd about the entrance, the queen is liberated either amongst them near the entrance into the empty hive, or else we put her into the hive from inside the house. The bees are a very few seconds in finding the entrance into which we wish them to go, and the swarm hives itself in a way that would please any bee-keeper.

When the swarm is all in (or perhaps we wait until the evening), we exchange the places of the swarm and the old hive. If supers were on they are now put on the swarm, with an additional one, if necessary. The half entrance thru which the swarm entered is then closed, and the other half opened. The trap is now taken off. All the old bees that leave the old hive the next day will not go back, but will unite with the swarm.

There are many ways of managing the colony in the old hive. Some nuclei can be made, or all the bees can be run in with the swarm, and the combs given to some colony being workt for extracted honey, or the old hive can be depleted of its bees by simply closing one half-entrance, and opening the other, alternately, every 5 or 6 days; the bees not being able to get back by the way they came out, will go into the next hive (perhaps this plan would not work during a dearth of honey;) or, the old hive can be moved on the fifth or sixth day, and form another colony.

When examining any particular hive, the shutter in front is let down to admit light. The front of the house is composed of 5 shutters. When the bees are inclined to rob, and we wish to examine a hive, we do not open the shutter, but lift the supers off, and set them on an empty hive alongside, and the brood-chamber is carried to near the window which has a screen running up about 6 inches outside, allowing the bees to escape but not return; the sash is hung, and when necessary is pusht up, the bees leaving the glass and escaping at the top of the screen.

When fixing the hives for winter, 2-inch rims are put underneath, the entrance being at the upper edge, thereby preventing the dead bees from stopping it up during the winter. The oilcloths are left on as in summer. I have discarded upward absorbents. Empty hives are put between each colony to fill up, and a light lattice partition about 2½ feet high is adjusted behind the hives, and dry leaves are then stuft in. I generally use pads made of about 50 thicknesses of newspaper next to each hive, and like the idea.

In the spring the lattice is lifted out and fastened up to the roof, out of the way, and the leaves filled into bags for next time. Packing and unpacking in the house can be done in the evening, on a wet day, or whenever convenient.

The hives are about 12 inches above ground, and where formerly I had to shovel snow very often during the winter, the last two years I did not have any of that work to do, but merely see, once or twice, that the entrances were not blockt up.

Hard-coal ashes are spread about 3 inches deep in front of the building, so that grass does not grow over the entrances.

If I were building another bee-house I would, perhaps, not put up as expensive a one, but would build a sort of lean-to shape, and batten the sides, covering the roof with felt paper.

The materials of my bee-house cost about $15, and I did the work in my spare moments.

If I were keeping 50, 100, or more, colonies, I would like to have them in bee-houses, about 20 hives to a house. By not having more than 5 colonies in a row, and by planting a few shrubs in front, besides having the niches different colors, I do not think there would be as much danger of queens being lost, and the bees confusing their hives, as in the average apiary, where usually all the hives look alike.

Nova Scotia.

Amalgamation—The Bees-and-Grape Question.

BY C. P. DADANT.

I HAVE just read the American Bee Journal for Nov. 9, and I am exceedingly happy to see that steps are being taken to merge our two bee-keepers' associations into one, and that in all probability the amalgamation will be effected. This is a step in the right direction. In these days of trusts and trades-unions the men who go their single way in the world are lonely indeed, and if in union there is strength, we can only gain by a thoro and compact adhesion to one another. Let us then all unite our best efforts to make this amalgamation successful, even if some of us must give up some of our own ideas, or theories, for the common good.

In the same number of the Journal, I notice a remark by Mr. Hasty concerning the feelings of a man who is no bee-keeper and has to pick grapes when they are covered with bees, owing to the stings he may have to withstand. This remark is made concerning the article from me on this subject, and which our editor had kept so long that I had entirely forgotten having written it. I must say that the additional experience which I have gained in the course of two years, since that article was written, serves only to strengthen me in my views as exprest not only in that article, but in many other articles and essays on this subject read before farmers' institutes, horticultural meetings, high-school classes, and bee-keepers' associations at different times. And concerning the possibility of people getting stung by the bees on damaged grapes, I must say that altho we have a vineyard of large size, and employ all sorts of people—men, women and children—to pick the grapes, we have not, in our mind, a single instance of any one getting stung, tho it is quite probable that some careless people may get stung on the fingers if they grab a bunch of grapes by the handful when bees are upon it.

But it is well known that bees, when away from home, do not sting unless absolutely molested, and therefore the danger from stings to the grape-pickers is so remote as not to be worth a thought.

But it is of great importance to remove prejudices of this kind, especially as they are based upon what are thought to be facts by the uninformed. The average grape-grower, when he sees bees in his vineyard, does not stop to investigate what is the original cause of the depredation, but simply charges it to the bee-keeper's pet. If he knew to a certainty the limit of their depredation, and that he must look elsewhere for the original and only true cause of his loss, his feelings, even if he carelessly caused a bee to sting him, would be altogether different from what they are under ordinary circumstances when he thinks himself wronged by some other man's profit.

The proof that bees do not, cannot, injure sound fruit, is easily made, but it takes some experimenting to do it, and very few people will take the pains to satisfy themselves. But a teaching of this fact in our public schools will make the matter right, sooner or later. It is much more difficult to demonstrate that the earth turns around the sun, and yet this fact has been so thoroly taught that no one is found among even the most illiterate in our civilized countries who doubts it.

But are there not many other things which some of our farmers believe as gospel truth which are yet just as false as the supposition that bees puncture grapes? What about the belief that wheat changes to cheat or chess, under certain circumstances? I was even told by a very nice and comparatively well educated farmer, that he would agree to change wheat to cheat, and the latter to timothy in the space of three or four years. His method was to cut the joint of the stem during the winter so as to weaken the plant. I referred him to Gray's Botany which ranges the two plants as entirely different species of the order graminacæ, so they could no more be raised from each other than rye could be raised from oats. But to no purpose. These beliefs come from superficial observation. A thing is taken for granted which a thoro experiment would disprove.

There are many other such erroneous beliefs. Did not our ancestors believe that the divining-rod could find not only water, but treasure, and even thieves and murderers? And I have no doubt that even to-day some successful gold-diggers could be found who would assert that their lucky find was guided by a willow twig!

Hancock Co., Ill.

Propolis for Grafting Purposes—The South African Honey-Bird.

BY S. A. DEACON.

TO what use is the enormous quantity of propolis put which the thousands of bee-keepers in the United States produce? It must, if carefully collected, amount to some tons. I ask this question because, in looking over some old numbers of the American Bee Journal, I happened on an enquiry for a recipe for grafting-wax, and which, I think, Dr. Miller answered. (Of course, the Doctor knows pretty well everything, only you mustn't ask him anything about bees!) Beeswax, resin, and, I think, whale-oil, was the formula given.

Now, I have done a good deal of grafting the past 30 years, and have never yet found anything to come up to propolis, and as long as that is to be had I would never think of using anything else. Propolis is always accumulating with me, for it is as carefully collected as wax, and every year there is a demand on the store for grafting pur-

poses. With 70 colonies of bees and a 6-acre orchard, supply and demand are about equal. Of course, the propolis has to be rendered plastic by warming over the fire before using, when, by keeping the lump against your breast, it will remain soft any length of time.

There is no better grafting material than propolis, and if orchardists were aware of that fact there should be a good demand for it at a price that would make it pay to collect.

Some time ago a contributor to the American Bee Journal suggested that I might tell something about the interesting habits of the *Indicator minar*, or South African honey-bird. I complied, and mentioned that the curious little critter is as likely to lead one into danger as to a bee-nest, and told how that one had once led me, and that when unarmed, into a narrow, rocky defile, and right on to the fresh tracks of a large tiger. He would have brought me, probably, on to the beast hinself had my practiced eye not caught sight of the "spoor," and had I not, with anything but gracious words, refused to follow him farther. Sometimes they will lead one to a cobra, or to a sleeping puff-adder.

I refer to the subject again because the other day one of these birds led me a long dance after him in the boiling sun, and just when by his excited antics I concluded I was near my reward, and my mouth was beginning to water for honey, the little rascal showed me, lying prone in the shade of a bush, the malodorous form of a drunken hottentot! Upon mentioning this to a neighbor he told me that one of these birds once led him to a buck, taking a siesta on the shady side of a bush; and that upon another occasion he followed one a long distance, to be shown a little bundle of recently bought store-goods tied up in a white handkerchief, and which some one had dropt. They attract one's attention by fluttering on the ground just in front of one, then going ahead and repeating it.

A Boer neighbor of mine always shoots them when he gets the chance. He is a great honey-hunter, and complains that while he can track bees to their rocky nests without these birds' aid, the little beggars are always showing other people nests of whose existence and with whose locality he alone would otherwise be acquainted.

South Africa.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 742.]

THIRD DAY—FORENOON SESSION.

The forenoon session of the third day was called to order by Pres. Whitcomb, and Dr. Mason offered prayer.

The following paper on "Bees or Honey—Which, in Spring Management?" by Mr. D. W. Heise, of Ontario, Canada, was first on the morning's program:

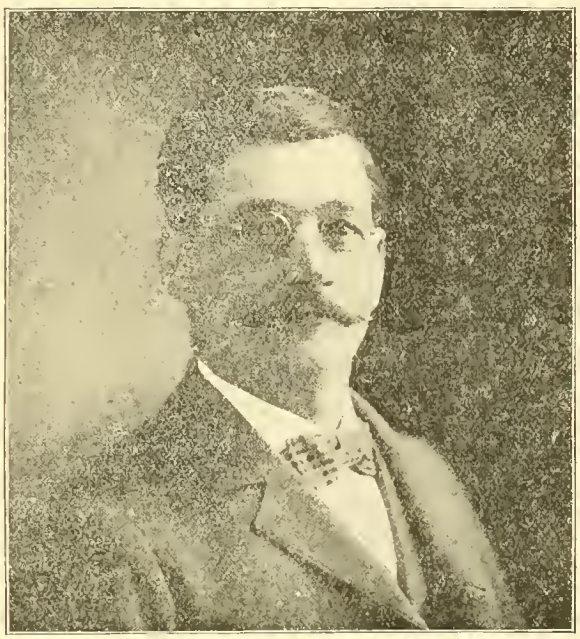
Bees or Honey—Which, in Spring Management?

If I were allowed to construe the above title according to my own ideas, I would have it read as follows: Should the bee-keeper's spring management be along the line of securing a large force of bees at the "expense of honey," or *vice versa?* If this, then, is a proper interpretation of the title, I would unhesitatingly answer, BEES, BEES, FIRST, LAST, and all the TIME. It would be just as consistent for the dairyman to expect the production of a large quantity of butter without first securing the cows, and the poultryman eggs without first having the fowls, as that the bee-keeper could expect a large crop of surplus honey without first securing a large force of workers to gather the nectar from the flowers.

Knowing, as we do, that the inventive genius of man has not yet devised any means by which the nectar can be extracted from the blossoms, stored in our hives, and transmuted into honey without the intervention of the busy bee, it follows as a natural consequence that we are still dependent upon the bees to carry out this important work. This, then, being the case, it follows that our prime object in spring management should be the securing of a large working force of the proper age before the main honey harvest opens. If, then, we agree on this point (and I feel confident there can be but one opinion in regard to it), it also follows that this important object in spring management can only be secured at the "expense of honey."

My paper is before an intelligent body of practical bee-keepers, who are cognizant of the fact that tho a hive may be well filled with bees that have come thru the winter safely, and tho there may be a 10-dollar queen in that hive—yes, and tho every other requirement has been successfully met—yet, if there is not a continual supply of honey and larval food, slow progress in brood-rearing must be made in that hive. Not only is it enough to *know* that there is a sufficiency of food, but we should also know that it is in a proper condition, and in a convenient position.

There are invariably days in early spring-time, and sometimes several in succession, when the bees are unable to gather from the outside; and if at such times there



Mr. D. W. Heise.

should be considerable brood in the hive (in different stages of development), I would consider even a liberal quantity of sealed honey in the hive as being in a very improper condition for the most profitable advancement in brood-rearing.

Experienced bee-keepers know well the difference in a colony where the supply of liquid honey surrounding the brood has been continuous, and one where famine has at times existed even with sealed honey in the hive. In the former the larvæ will be found a pearly white, and fairly swimming in the food that has been supplied them; while in the latter the brood will be found destitute of food, of a deathly yellow color, and destined to develop into a sickly and short-lived generation, if indeed they ever mature, and will be found of very little value as honey-gatherers.

Many experiments have been conducted by men of extensive apicultural knowledge, with the object in view of stimulating the queen to greater activity in egg-production early in the season; and various have been the methods that have been outlined for the accomplishment of this object. But, so far as my limited observations have directed me, I am forced to the conclusion that any manipulation of the brood-chamber that will cause the bees to move their honey from place to place, will bring greater results in *that* direction than anything that has come to my notice. And the uncapping of honey, when such exists in the hive, is, to my mind, one of the very best methods that can be adopted for the enforcement of that object.

It is of course clear to the mind of every bee-keeper

worthy of the name, that there are a great many requirements that must be met for the greatest possible advancement in brood-rearing, apart from keeping up the food supply. But I have a firm conviction that there are a great number of honey-producers who could so vastly improve on their spring management in this direction, that the difference in results when the main honey harvest arrives would be obviously apparent to even the most skeptical.

I would, then, not only advocate the uncapping of honey that may be in the brood-chamber, but I would go further, and say that any bee-keeper who is alive to his own interest, and that of his bees, should always be in such a position that he could at any time supply his colonies with combs of sealed honey (outside of a division-board) after brood-rearing has once commenced, and the sealed honey has been exhausted, or when the bees are prevented from any cause whatever from bringing in a sufficient supply from the fields for the encouragement of the extension of the brood-nest.

Yes, I am persuaded to go still further, and say that in my opinion I would consider it prudence on the part of the honey-producers if they would so manage as to have the dark and inferior honey (a certain amount of which most localities furnish before the white flow sets in) stored in frames of such a size that they could be inserted in the brood-chamber early in the spring of the following year (first uncapping them), for the encouragement of brood-rearing. By this management we not only keep an article off the market which will always have a tendency to injure the reputation of good honey, but we utilize it ourselves, and actually trade it off for bees early in the season, the great advantage of which I am sure no one will for a moment question. By this method we are also able to keep a considerable number of partly worn-out workers in the hive, where they are of immense value in keeping up the required temperature during unpropitious weather, when their lives would be endangered by wandering out, and yet brood-rearing goes on apace.

There is one important point that I wish to refer to, and it is this: Any manipulation in the hive that has for its object the moving of honey by the bees will likely carry with it the spreading of brood to some extent—an operation which the novice will always do well to fight shy of, and one which even the expert will only attempt with caution and the exercise of good judgment; but if it is discreetly entered into, and judiciously carried out, it will result in a manifest advantage to the colony, and the ultimate fattening of the purse of the operator. D. W. HEISE.

Mr. Abbott—There is one idea that Mr. Heise did not emphasize very much, and that is, that an abundance of honey in the hive does not indicate success. A good way to encourage breeding in the spring is to uncap some of the sealed honey in the hive. In some localities it would be disastrous to do so. Even the robins sometimes make mistakes. You see that our Canadian friend has been watching these things. Bees can uncap honey, but it is more difficult than many suppose. They will not work readily on honey that is not uncapt. They will go to work outside first. It shows that they have a dislike to doing it, or it is hard work for them to do it. I believe it pays in the West to see that the bees have plenty of honey. If a horse has plenty of feed upstairs, but has no one to give it to him, what good does it do him? This idea struck me very forcibly.

Mr. Niver—We would like to hear from Mr. Howe, from the buckwheat country. Uncapping honey is too slow for me.

Mr. Howe—We have no trouble with uncapping honey. In the spring we set out hives with honey that is capt, and the bees take care of it. Of course, in a spring like last spring, it was a little difficult. Ordinarily, we have not so much work.

G. W. Bell—When honey is fed in this way, the stronger colonies get the most.

Mr. Abbott—Do you have no flow at all in the early spring?

Mr. Bell—Ask Mr. Howe if his neighbors' bees get any of the honey so fed?

Mr. Niver—I presume they do.

Dr. Mason—I believe Mr. Abbott is right in his idea about the bees uncapping honey, and Mr. Howe is right, too. We do not want to spare honey for the neighbors' bees.

Mr. Niver—We have another practice. Instead of putting honey in the hive we use supers, and put the honey we wish to feed in them.

Mr. Hershiser—I like Mr. Niver's method of stimulating bees better than Mr. Howe's. I don't like to have bees get into the habit of carrying honey away from hives. It teaches them a bad habit.

Mr. Howe—As to teaching bees a bad habit, I think it teaches them a good habit.

Pres. Whitcomb—Do you think the worker-bees ever go to work gathering nectar from flowers after they have learned to rob? I find that they are just like other thieves. They don't do anything else but steal. We have to set a trap and catch them off.

Mr. Howe—I have never had a bit of trouble. We leave a hive standing there, and when they see that it is empty, they go away satisfied.

Pres. Whitcomb—I have no record of a bee reforming after learning to steal.

Mr. Bell—I got a queen from Ohio, and her colony did nothing else but rob as long as the queen lived. When she died I was glad of it.

Mr. Abbott—Let me give an illustration. These large bee-keepers find it hard to know what they lose and what they gain. They don't miss it. So it is with Western corn-growers. That is, there are large and small agencies. A little while before I came away a colony got to robbing. My wife said, "What is the matter?" I went out and found we had accidentally left a comb of honey out. I found what the matter was.

G. B. Hurley—I would be afraid of work like that. I lost a colony of bees just in that way.

Mr. Coggshall—How much more is a frame of brood worth than a frame of honey?

Mr. Hershiser—What do you do with brood?

Mr. Hutchinson—He wants to trade honey for brood.

Pres. Whitcomb—I fail to see the advantages in teaching bees to rob.

Mr. Hutchinson—Won't it have a stimulating effect, going out and bringing in honey?

Pres. Whitcomb—No.

Dr. Mason—I believe it will have a stimulating effect.

Mr. Hershiser—How do you know a robber-bee?

Pres. Whitcomb—By it's sleek appearance. It has worn off the hairs.

J. H. M. Cook—It seems to me that we make a sort of mistake. When we put a comb of honey in the hive it does not teach bees to rob, and it is not robbing. When we feed them they get it in the legitimate way. If there were a few bees in there then they might fight, and be taught to fight and rob. I think it is far better to take out the comb. I would rather have a large increase of brood than to have pounds of unused honey in the hive in the spring.

Pres. Whitcomb—But when they take the honey they will go to work and tear the comb down.

Mr. Howe—About separating brood, suppose you separate brood and it comes a cold night. With our method a cold night does not affect it.

Dr. Mason—It does not follow that bees will tear comb down when they take the honey. If the combs of honey are in a hive so closed that but a few bees can go in and out at a time, the combs will not be torn, but if they have free access to them, they are quite sure to injure them badly.

Mr. Hershiser—I think it is a very unwise plan to uncap the comb and set it on the outside.

Dr. Mason—I suppose every intelligent bee-keeper would agree with you there.

Mr. Cook—You should use judgment.

Mr. Danzenbaker—I have listened to the remarks with a great deal of interest. I think the young man is right, and Mr. Coggshall is right. About uncapping, the bees in the neighborhood smell the honey. I merely take a knife and press it on the comb. Such honey is like capital in a bank. In this altitude queens do not begin laying until the middle of March. In feeding bees in the spring, feed unsealed stores. If they have honey in the hive they will use it. I succeeded in having the first swarms in this neighborhood. Mr. Todd had 100 colonies, and fed back honey and lost 90 of them. I don't want to feed bees until plums bloom. I always want a warm day to feed in.

Mr. Wander—How can you do it when the hive is crowded?

Mr. Doolittle—I want to say just a word about putting honey in such a hive. *Don't do it.* Don't do anything; that colony is good enough. My good brother from Kansas is in a starving condition. *These* two are sleek and fat. I want to help *that* brother. These that are sleek and fat don't need the help. It teaches them bad habits. But about putting that frame of honey in the center of the brood—I don't care how cold it is if it doesn't last over 48 hours.

Just as quick as the knife is put in that honey what happens? The whole colony is active. At the end of that time, if it does not continue more than 48 hours, you have roused the activity of the bees. You want to do it at the right time. Nothing booms along your business like doing the right thing in the right place and at the right time.

Dr. Mason—Why not let that strong colony do a little more and get a little stronger? Now, if Mr. Doolittle takes a little bigger suit of clothes than other people, why not let him have them? If he fills his clothes full, and they show they are not large enough for comfort, why not let him have larger ones? I believe in expansion. Feed the strong colonies if it will make them still stronger. I never saw a colony too strong during the honey-flow.

Mr. Doolittle—If I have everything I need, is it necessary for me to have more? Bees are like men—they are grasping. The more they have, the more they want. You know which colony needs the feeding. You are the better judge.

Dr. Mason—Mr. Doolittle is making just such statements as we see in the bee-papers. We are talking about those that *do not* have all they need. If bees are like men—if one colony is brighter, more active and energetic than others, and requires more room and more food—why not furnish such colonies with what they need? We are working for best results, and we want strong colonies. The bee-keeper's motto is, "Keep all colonies strong," and the stronger the better for honey gathering.

Mr. Coggshall—Mr. Howe is like Mr. Doolittle. When they have no breakfast they want their dinner. So it is with bees.

Mr. Cook—It makes no difference if we can transfer a little brood—we want eggs. It is stimulating brood-rearing, but, of course, it must be done when the weather is warm. We get the bees, and then we can distribute them evenly.

Pres. Whitcomb—That is not the point we were discussing.

Mr. Cook—I don't care where we get the brood. We can strengthen the weak colonies with brood from the strong ones.

Mr. Abbott—Take a knife and cut off the cappings.

Mr. Doolittle—I don't believe you do.

Mr. Cook—I have not been bothered with the honey running when I have shaved off the cappings.

Mr. Doolittle—That is, candied solid, I suppose.

Mr. Cook—No.

Mr. Abbott—I have been shaving for years. We don't roll them to Ohio in the sand.

Dr. Mason—Probably you don't have the "sand." [Laughter.]

Mr. Abbott—We have plenty of "sand."

Mr. Doolittle—What do you do about exposing honey?

Mr. Root—Say "I" when you ask that, Mr. Doolittle.

Mr. Hutchinson—The bees will uncap it quickly enough if you have it out-of-doors. Fussing with this in a large way is no fun.

Mr. Doolittle—There is another point that has not been toucht. I have tried out-door feeding for stimulating purposes, and I have become disgusted with it. I fully agree with the president, that if a bee takes evaporated honey that bee will forever be on the go for more. I am a little fellow by the name of Doolittle. I carry a box around for my 260 or 270 pounds to rest upon, and a colony of bees will follow me around for weeks for the honey they smell on that box. When Mr. Hutchinson has filled up with beef-steak he doesn't want much more right away. When you find dollars you will think you can keep finding them and you won't stop to pick up pennies.

Dr. Mason—Feeding in this way does not induce robbing with me. I don't believe the bees know that it *is* robbing. They have to fight if they rob. Localities differ. New York robber-bees that have gone out to Ohio may be robbers there as they were in New York.

Mr. Hershiser—Do you find it pays to feed?

Dr. Mason—Yes, sir. I don't want it to go out that I recommend putting a frame of honey in the middle of a *weak* colony.

At the close of the above discussion Mr. Danzenbaker read a paper on

The Best Method of Comb-Honey Production, With Latest Hive Improvements.

This is an important topic, especially for beginners. Space will only permit the merest mention of the essentials of the best method in the order of their importance:

The first is a good field where a full and steady flow of white honey can be had; where bees can be wintered safely on the summer stands in box-hives, where hives and flying bees are sheltered from cold or violent winds on dry ground, sloping southeastward, that the morning sun may shine in the entrances of the hives.

The second is large, healthy American-bred, pure-Italian queens, without trace or taint of Cyprian, Holy Land or Carniolan stock in their composition; of gentle, docile disposition, safe to handle, and not over a year old; that they may crowd the brood-frames full of eggs without over-swarming, forcing the bees to store their surplus in sections.

The third is a double or thick wall, tight, dry, warm hive, consisting of separate hive-bodies and supers, for tiering up to any size desired; to be used on loose hive-bottoms that can be easily cleaned, and afford ample ventilation beneath the brood-frames, the full width at front and rear of the same.

The bodies should be wide enough to hold 10 brood-frames. In no deeper than these can bees build natural combs without the cells stretching out of shape, resulting in sagged, bulging, corrugated or scallopt edges at the bottom where worker-bees are reared.

The last but not least consideration in securing comb honey is strong colonies of bees, old enough to collect the honey at hand. While a small colony of bees in warm weather may fill a small box solid with honey, a larger colony will do much more, proportionately, as they can maintain sufficient heat in the supers to work continuously day and night from first to finish. Sufficient heat has much to do with success or failure in the production of comb honey, as it is as impossible for bees to produce and work wax into cells in cold supers as it would be for their owners to fasten dry stamps on paper. When bait-combs are used in weak colonies, bees may cluster on a few sections, and finish them by forming a wall of bees about them to create sufficient heat.

I have always produced comb honey, and I find that two supers, protected by wrapping up or with an outside case, are as good as three unprotected, and I have never yet seen a super so warm (where the outside air was up in the nineties, in Virginia, North Carolina and South Florida), but that the first finisht and handsomest sections were always in the center of the super, and extending outward just in proportion to the strength of the colonies. Sufficient heat has more to do with success or failure than any single thing in the production of comb honey. When we consider that the heat of brood-nest and supers must be maintained continuously in the nineties, we realize the importance of retaining it as much as possible, and the bees instinctively seal air-tight each crack or crevice at the top or sides of their hives to prevent the loss of warm air. Hence, there is a limit, according to the strength of the colony, to the space that can be given them in brood-rearing, lest there should be loss of time, and space filled with excess of pollen, or combs deserted to the wax-moth.

Forty of the strongest colonies of pure Italians I have seen this season wintered safely last winter out-doors in nine closed-end reversible-frame two-story hives, 7 inches deep, with flat covers ⅞ inch thick, left as sealed down solid by the bees, with dry cork-dust cushions over the cover, with a cap 6 inches deep telescoped over the same. They had plenty of honey, and by swapping and evening up as needed, most of them had three bodies filled with brood and bees ready for clover and basswood. Many of the frames were solid slabs of brood from top to bottom. By shaking most of the bees on one story of brood frames they crowded into the supers and began drawing foundation at once. With no signs of loafing they went to work with the vim of new swarms. The surplus brood was set aside with bees enough to care for it to hatch out and re-inforce the colonies with the supers, when it would do them the most good.

The largest possible yields of comb honey can be had from single colonies by breeding all the bees possible in two stories before the full flow begins, then contracting the brood-nest one-half and reversing one set of frames to force all the bees of a strong colony into one body and super; the latter to be raised up when the bees commence sealing the first cells, and putting on an empty super of sections, with full sheets of foundation in the same beneath them.

It is worse than labor lost to put on sections before the bees are strong enough to fill them, or before the honey-flow begins, with the mistaken idea that they are getting used to them. In a full flow they may refuse to start if the brood-frames are clogged with sealed honey at the top above the brood.

But they can be started at once by exchanging a part

of their full frames for dry combs in the center of the brood-nest, or, better still, by breaking the cappings of the honey and turning it bottom side up where reversible brood-frames are used.

If a flow begins where hives set in couples, and neither colony alone is strong enough to work in supers, the working force of the two may be united and set to work at once, and the extra brood given to other colonies.

When colonies are working in supers during a honey-flow whole supers of young bees and sections can be given to weaker colonies that will start them working with a rush to finish them.

When some supers have sections partly filled with unsealed honey, part of them may be used as starters for other supers.

When a strong colony begins to cap the first set of sections they can be raised up and a second set put under them, when the bees will finish them up while starting in the lower sections; but, if raised too soon, they will not be finisht properly. It is safer to crowd all the time, even at the risk of having a few idle bees.

All queens should be clipt when working for comb honey, as the best possible condition for comb honey is just suited to swarming. When eggs are seen in queen-cells, swarming can be controlled by removing two-thirds of the brood, and giving dry combs or empty frames with starters only. The extra brood-combs may be exchanged for inferior or drone-combs. By this plan swarming can be absolutely controlled.

THE LATEST HIVE IMPROVEMENTS.

The woeful waste of bees the past winter has shown more conclusively than anything I can say the decided advantage of closed-end brood-frames, with their combs extending solid to the end-bars, making each comb a compartment similar to combs in box-hives. By personal observation and correspondence from Northern New York, Tennessee, Texas and Florida, I find closed-end frames have wintered bees safer than the open-end frames. When protected with an outer case they have equalled chaff-packt and box hives, even where the cold was 30 degrees below zero. Why should we have hanging frames so handy to handle if they lose half the bees in wintering, so as to be utterly worthless for comb honey?

I have devised a method of supporting brood-frames from the center of the end-bars on solid cleats, that add to the thickness of the hive-wall, and afford a reliable bee-escape, free of cost, that can be utilized if desired.

In working for comb honey I prefer a large brood-nest, like the Dadants, for fall, winter and spring, for keeping and breeding up strong colonies till the harvest. But I don't like their large frames, as I used them eight years in the first hives I ever owned. I prefer the large frame, divided horizontally, about 7 inches deep, that I can contract the brood-space one-half in putting on the supers at the beginning of the honey-flow, when it is most desirable to utilize the bees for surplus rather than in rearing bees to be needless consumers after the harvest.

I prefer a 10-frame body that can be contracted to 8-frames, by placing a solid slab of sealed honey in a closed-end frame on either side, which allows of bees clustering over it to send up heat in the sections above them. I have used one-half-pound sections, two-pound sections, and frames 6 inches deep by 12 inches wide for comb honey, with and without separators; also the so-called Standard 4¼x4¼, thick sections in wide frames and T supers. I never liked any of the three, and I rejoice that I have lived to this hour to say that they have had their day, and the tall 4x5 inch, thinner, plain sections have come at last, and are here to stay, and the sooner the Standard bee-writers and supply dealers get themselves in line with this sober, solemn fact the better they are going to feel about it.

I regret exceedingly that some of my good freinds are advocating short-weight, ten-penny sections, which can only help the supply manufacturer and the wholesale commission man, who are pushing these small sections, while the producer and consumer will have to pay the piper. In my market the pound sections sell the best, and they can be sold wholesale by the piece by producers that know their business. I have never had to sell my own honey by weight. It requires extra-good seasons to get the smaller sections filled properly, as bees will not work well in a limited space, and the smaller the surface the worse the unsealed cells look, and the grocer will insist on buying them by weight to sell by the piece. As it requires the same handling, and costs as much, for the small sections and foundation, they cost the producer relatively more than the larger sections, and the sooner producer and consumer call a halt on this small-section folly the better for all concerned.

All 4x5 inch sections made by the A. I. Root Co. for the Danzenbaker supers are full ⅞-inch thick, which gives more strength and firmness to the sections when folded. No one will use a thinner section after trying them.

The fence separators for the section supers are one of the best improvements that has been brought out recently, altho recommended and used by the late B. Taylor, of Minnesota, 10 or more years ago. The nearer nothing a separator can be the better, if it keeps the queen out of the supers, and the sections straight and uniform in weight. The fences fill the bill fully, and they are bound to "fence in" the whole bee-keeping fraternity, and they, too, are here to stay, altho some of the "big 'uns" did an awful amount of hard and high kicking at the venturesome fellows who felt pretty hard hit at the time, but are getting ready now to say, "I told you so at first."

One of the best among the latest hive improvements is the section-holder, forming a divisible honey-board or topless wide-frame, covering three sides of the sections. The edges are covered with the fence cleats, hence they come out as clean as new, ready for the shipping-cases.

The tempered wire springs that are now used in supers, made by the A. I. Root Co., are a valuable improvement over wedges, as they are always in place with a perpetual pressure. The three-piece Danzenbaker cover and bottom will be further improved for the coming season, and are decidedly the best made.

The Danzenbaker hives combine the best features in other hives, with the latest improvements already described.

F. DANZENBAKER.

Mr. Abbott—I did think I would not say anything about this, but I want to give some facts. These things have come to stay. This is a big country. Away out West there is a lot of stock that I want to sell; there is little sale for it. Last year we put in a large stock of supers. I don't believe there is in Missouri 25 percent of closed-end hives. I am astonisht to hear that the section-holder is a modern improvement. Twenty-three years ago I bought it and threw it away. I don't know any bee-keeper in Missouri near me who uses it. Some localities use it. When I went to Missouri, 16 years ago, Mr. Armstrong, of Illinois, had a fence separator. (By the way, I have a stock of fence separators to sell.) Mr. Armstrong's separator was the best separator I ever used, but I don't see the need of putting separators in bee-hives. You can put in the sections and give plenty of room. Bees don't like to be disturbed. Men come to me and ask for advice about separators I say they are useless. For Mr. Danzenbaker it may be all right, but for the majority it is useless. I have in my possession 5,000 pounds of honey, not a single pound of which was produced with separators. You can sell "chunk honey" to good advantage. People will smack their lips and say, "That chunk honey is good."

QUESTION—How do you ship that kind of honey?

Mr. Abbott—I don't ship it. Sell your honey at home.

Mr. Stone—I would like to give Mr. Abbott some idea about the proportion of honey that he would have left on hand if produced without separators. At the World's Fair, out of 2,300 pounds brought us, about 20 pounds of that produced without separators was fit to ship and sell.

Dr. Mason—Mr. Danzenbaker says, "Why have standing frames if it makes the bees die in winter?" It doesn't. Don't make that style of statements. Standing frames *don't* make bees die in winter.

Mr. Danzenbaker—A gentleman talkt to me about my hive. I askt him, "Did you ever use that hive?" He said "No." I sold him that kind of frame, and he found fault because the frames were open. I sold him a Root hive. This man got 50 hives, and he got 50 the year before; colonies on the open frames all wintered safely. Twenty-three colonies on the closed ones died. They are the only ones that I have heard of. He wintered them in Hoffman hives. In closed-end frames there is no circulation around the hive.

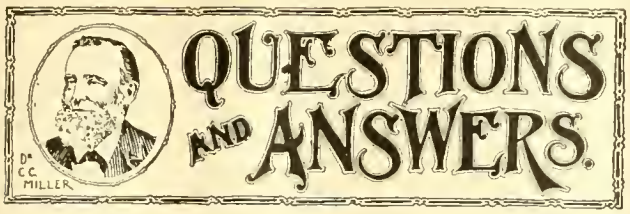
Dr. Mason—I understand that Mr. Root has wintered bees in Danzenbaker hives, and 50 percent of the bees died. Is that a fact, Mr. Root?

Mr. Root—It is.

Dr. Mason—But he only had two colonies, and one died. [Laughter.]

[Continued next week.]

The Premiums offered on page 765 are well worth working for. Look at them.



Trouble in Rendering Beeswax.

I have had some trouble in rendering my beeswax this fall. The oftener I boil it the darker it gets, and when I put it in the molds it cracks, is hollow in the center, and sticks to the sides, altho the pans are greast. What is the matter with it? CALIFORNIA.

ANSWER.—It is probably always the case that the oftener you boil beeswax the darker it gets, and one way to avoid having it so dark is not to boil it so often. There is no need of repeated boilings. You will do well to try a solar wax-extractor. With the glorious sunshine you have in California there is no trouble about getting heat enough. The vessel in which you boil it may have something to do with darkening it. Cooling slowly will help against cracking. The larger the body of wax, the slower the cooling. A lot of water in the vessel with the wax will be much the same as a larger quantity of wax. It may be made to cool more slowly by covering close while cooling, or by putting it in the oven of the stove, with a low fire, letting the fire die out, and not removing the wax till the stove is entirely cold.

Starting with Bees—Transferring, Etc.

I am reading the American Bee Journal with great interest. I am glad the editor adopts the new orthography. It shows he believes in progression all around. The good fellowship manifested by bee-keepers with each other makes me like the company.

I have caught the bee-fever. I had 5 colonies in Langstroth hives, the combs, I presume, being somewhat crooked. Being a novice, I did not start them right. I had 6 colonies given me. They were in old boxes and weighed from 53 to to 94 pounds each. They did nothing for their owners, of course, because they had no care. I moved them home lately. One colony I had boxt tight for three miles, still the bees are alive. I moved them about 12 miles and they seem to be all right.

1. How can I tell if the queen is alive or not? I had a terrible time moving them. The rotten hives had holes all over them, and I was stung over a hundred times, and was advised seriously by friends to give it up; but never—not I. I washt in soda and salt, and used ammonia, and the stings amounted to nothing.

2. How and when can I transfer the bees—after they swarm or before? and about what time in the spring? I want as large an increase as possible, and I want to introduce good queens. I am handicapt too much at present to make a success. I have to depend on my neighbors to hive the swarms for me. I am working at the State penitentiary, and can only go home on Sundays and nights. My wife is afraid of bees. It seems to me I could just place an old hive of bees on top of a new hive with starters and stop up the vacant places. After a few days or weeks place a bee-escape between them, and when they all have gone below take off the old hive. If the queen did not go below, so much the better; I could then introduce a new queen; or, if a part of the bees did not go below, I could then divide. We have moderate winters here and do not need to house our bees.

3. Can I have starters in hives a month or two, all ready? Would they become too dusty or harmed in any other way?

4. Can I buy and keep on hand a dozen or more queen-bees, a month or longer, ahead of time, so as to be sure of a good queen in an emergency? On account of freight, etc., hives will cost me considerable, and I believe I can make them cheaper.

5. There are several persons in this part of the country who destroy their bees for the honey. I don't suppose there is any way of saving the bees at this time of the year, is there? WASHINGTON.

ANSWERS.—You say the bees seem to be all right, from which it is probable that not many were lost in the hauling, in which case you need have no particular anxiety about the queen. In case of smothering, starvation, etc., she is among the last to succumb. You will do well not to try to find whether the queen is all right at this time of year, when no brood is likely to be present, but wait till brood is present next spring, and then if any colony has no brood at a time when you find brood in all other hives, you may judge that no queen is present.

2. You will probably do well, especially if you have not had much experience, to wait for the bees to swarm. As you are anxious for increase, let the colony swarm as many times as it will, setting the swarms on new stands and leaving the old hive untoucht till 21 days after the *first* swarm, when you can transfer according to the instructions in your text-book. A safer plan will be to set the swarm on the stand of the old colony, putting the old colony close beside the swarm, a week later moving the old colony to a new stand. But this way would give you only one new colony for each old one. It would give you more honey than the first way, however.

As you are not at home to hive swarms, it may be that your plan might suit you better, providing the old hive is not too large. If the comb is not built clear down in the old hive, cut off the lower part of the hive that contains no comb. If that cuts away some empty comb at the lower part it will do no harm. Don't put an escape between the two stories. That might result in starving the brood above. The bees will not use the lower hive till the upper one is crowded, so the less spare room there is above the sooner will they build below. Wait till you find brood, or at least eggs, in the lower hive, and then you can set the old hive on a new stand. It will be better to have full sheets of foundation than starters, for in the latter case you would have too much drone-comb.

3. Yes, you may have it five years ahead. If it gets dusty the bees can clean it off.

4. You cannot keep queens on hand very satisfactorily unless you have at least a nucleus for each queen.

5. It is somewhat doubtful whether you could make use of such bees so late in the year without having frames of honey for them; still, you might give them frames of candy as described in your text-book.

Wax-Moth—Killing a Colony Without Injuring the Honey—Extracting-Frames.

1. Is the wax-moth poisonous?

2. How can I kill a colony of bees and not spoil the honey?

3. How can I get the extracting-frames cleaned out so that they can be stored away for winter? MINN.

ANSWERS.—1. The wax-moth is not poisonous, it has no sting, and you need have no fear of its biting you. The only danger from it is the danger of damage done to the combs by its larva, the wax-worm. When in sufficient numbers, these worms will destroy the combs of a colony in a short time.

2. The usual way, and perhaps as good a way as any, is to brimstone the bees. There may be some danger of discoloring the combs of honey, but these are not generally of virgin whiteness in the brood-chamber, and you will hardly notice any discoloration made by the brimstone. You may get what honey there is in the brood-chamber without first killing the bees, by drumming out the bees if a box-hive is in the case, and if it is a movable-comb hive all you have to do is to take out the frames and brush off the bees. Nowadays very few bee-keepers kill bees designedly, altho there may be exceptional cases in which it is profitable to destroy the bees. With the careful study of a good text-book, you will probably find plans by which you will do better than to kill bees.

3. Pile up the supers of extracting-frames some rods distant from the apiary, and give the bees free access to them. That is the best, and probably the only way in which you can have the work thoroly done. Lately, however, it was advised by one of the best European journals—the Revue Internationale—not to have the combs cleaned out after the season of extracting was over, but after the last extracting to put them away in their dauby condition. It was said that they will keep in good condition so, and when given to the bees the following season they would be more prompt in filling them. A question might arise, however, whether there would not be danger that honey stored in such combs would not granulate more quickly, as the granules in the cells might favor granulation.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

GEORGE W. YORK & COMPANY,

118 Michigan St., Chicago, Ill.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. NOVEMBER 30, 1899. NO. 48.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

A Light Year for Supply-Dealers is prophesied by Gleanings in Bee-Culture. Reasons—heavy losses last winter, general failure of the honey crop, leaving supplies of the previous season still on hand; and discouraging effects of disease in some localities.

Loquacious Paid Writers for the bee-papers are getting some whacks nowadays. The expression "loquacious paid writers" raises several questions. Are all "paid" writers "loquacious?" Are all "loquacious" writers "paid?" Do editors select those whom they pay because of their loquacity? Are they likely to get better service without pay than with it? Is that the general rule in other departments? Are literary, agricultural, and other journals the best that pay the least for their contributions? Referring to this matter, "Somnambulist," the "delightful dreamer" of the Progressive Bee-Keeper, says:

"Allow me, pray you, to ask, if the journals did not employ "loquacious paid writers," where, oh, where, would they secure copy? And does being a paid writer, loquacious or otherwise, exclude one from possessing a few grains of common-sense?"

Selling Honey Outright for Cash is the way for bee-keepers to dispose of their product *when they can*. Says F. L. Thompson in the Progressive Bee-Keeper:

"The last two years a buyer has come to this county and cleaned up the product, shipping the honey himself, and paying cash for the honey when delivered at the car. The advantages of such a plan are considerable to all concerned. No leakage, no drayage, no commission, no waiting, no misunderstanding; the buyer knows what he is doing, and the producers know what they are doing. The firms who buy in that manner ought to be given every encouragement, so that this method of purchase may eventually become the rule and not the exception. It tends to place honey on the footing of a staple, like cotton or potatoes, which are largely bought in the same way."

Mr. Thompson is sound in his views, and the bee-keeper who compares the present year with the few years immediately preceding will see cause for encouragement that he will hereafter have no need of the services of the commission man. But we may as well open our eyes to the fact that the supply of honey this year is probably smaller than it has been within the present generation. In proportion as the crop is scanty, commission men are forced to buy for cash or not handle the goods. So the unusual scarcity has brought into the field an unusual number of buyers, and unless the future is different from the past, the next season of big crops will see many of the cash buyers of this year drop back into the commission ranks.

After all, much lies in the power of bee-keepers, and if all hold back for cash sales they can get them.

The Bee as a Fertilizer Appreciated.—It is pleasant to note that in many quarters, even in the religious weeklies, the bee is beginning to be appreciated as something more than a mere honey-gatherer and stinger. Barring the error as to the sex of the bees that do the gathering, here is something good from the pen of the Rev. Geo. A, Little, in the Herald and Presbyter:

This spring, having a little ground, I determined to renew my youth by having a garden. A neighbor said to me: "No use to plant cucumbers." "Why?" I askt. "Are not the soil and the season favorable?" "Soil and season are all right, but there are no bees. You will have vines and blossoms, but no cucumbers." I caught the idea. These little insects, going from flower to flower and wallowing in them, get on their legs and bodies more or less of the pollen, and thus fructify the blossom. That was the idea. I knew this to be true of the bumble-bee and the red clover. The farmer needs, in order to raise clover seed, clover blossoms and bumble-bees.

I planted the seed and watcht for the honey-bees. There was white clover on the lawn, but up to the middle of June I had seen but one honey-bee, tho I had an eye wide open for them. The yellow blossoms were on the vines, and yet not a bee. But on Sunday one came and found his job. Monday he was on hand again. Then finding himself overmatcht, he brought a mate, and now a half dozen can be seen at almost any hour of the day, "busy as bees."

And with that for a text, Mr. Little preaches a sermon—and a very good sermon, too.

Bee-Supplies for 1900.—Only a few changes are announced in Gleanings in Bee-Culture. One is the combination of stand and bottom-board in one—a thing that may be liked by some whose bees stand year in and year out without moving.

Another of very much more importance is in hive-covers. In the Higginsville cover and others of that kind, a central piece something after the nature of a ridgepole covered the joint of the two principal pieces of the cover, and in very dry climates there is a chance that the wood might shrink so much as to let the water in. The new cover "consists of three pieces as before, and two end cleats; but the center or gable piece is channeled out on the under side to correspond with the projections on the edges of the two side-pieces that come together. The principle of this is a good deal like old Higginsville, with this addition—that the two side or gable pieces have perpendicular shoulders, and the ridge-piece is channeled so as to straddle over these two shoulders, leaving *perpendicular* edges of contact, rendering it impossible for the water to work its

way up hill and finally into the cracks between the two boards."

The Cowan extractor has its inside work made lighter and at the same time stronger. The reels of the two-frame Cowan instead of being made of several pieces riveted together will be made of one piece.

Grading Honey a Matter of Locality.—Notwithstanding the effort to establish a system of grading to apply to the whole country, various methods of grading are in operation, and it seems that not only may each buyer or seller establish his own system of grading, but may also change it from year to year. The following by F. L. Thompson, in the Progressive Bee-Keeper, is to the point:

"The buyer last year made a distinction between white and amber honey, and paid less for the latter; this year he dropt that standard entirely, and called all white comb No. 1, and stained or water-colored No. 2. In fact, the color of the cappings seemed to be almost the only thing determining the grade. We have no dark honey. Then, too, he even put sections in the first grade that were not quite finisht, providing the comb was white, in flat opposition to the Colorado grading rules. Color of cappings is something very difficult to describe, and the only way is to have sample sections to go by."

Bees in War.—Mr. W. C. Wells, of Ontario, Canada, writing for the Canadian Bee Journal, gives his experience with a peddler and a colony of bees in a little "war" of his own:

We have heard so much about bees being used in war for the transmission of letters, etc., that your readers may be interested in hearing of a true story as to the use of bees in war.

A Dutch peddler and I had quite a time. He was buying old brass and rubber shoes. I wanted to sell him some brass, and when it was weighed out it came to 75 cents. Then he wanted to pay me in truck out of his pack. I told him I wanted cash. He said he did not pay cash, but I said he could not have it unless he paid cash. Then he offered me 40 cents, then 50 cents, and I finally said I would not let it go at any price. Then he wanted 50 cents pay for his time, to which I objected. He said he would not leave until he got his pay, and he would charge $3 per day for what time he stayed. I ordered him out of the house, but he said he would not go until I paid him, and he said he would thrash me, and he used very abusive language for half an hour.

Well, I did not know how to get him out, as he was a big, stout man, and I nearly 73 years old, I was no match for him. All at once I thought of trying if the bees could persuade him to leave. Quick as thought I stept out of the back door and snatcht up a hive of bees and brought them in. I opened the hive and took out a frame of bees, and in less than no time the peddler was tearing down the road, and I after him with the bees, but he was too quick for me.

I have laught every time I think of that scene; it was my first fight, and I came off victorious.

"The Honey-Makers."—In ancient times the bee was an important factor in the everyday life of the family, because honey then played the same large part in the housewife's economy that sugar does now. Literature is filled with the honey-bee and its incomparable gift, which appears now as ambrosia, now as nectar; and always as the synonym of sweetness unsurpast.

The Vedic poets sang of honey and the dawn at the same moment, and all the succeeding generations of India have chanted honey and the bee into their mythologies, their religions and their loves. The philosophers and poets of Greece immortalized the bee. The Latin writers studied it not only for its usefulness as a honey-producer, but also for its unique character for industry, its skill as a builder, and for its wonderful sagacity in social organization.

These and many more interesting facts are told us by Margaret Warner Morley in her new book, "The Honey-Makers." The author first treats of the structure and habits of the bee, and then of its place in song and homily. Nearly one-half of the volume of over 400 pages is given up to the literature and history of the bee, and the author has carefully sifted for her purpose the writings of the Hindus of Egypt and the East, of Greece and Italy, of Christian and mediæval times. One is amazed at the largeness of the role which the bee has played in the thought of ancient peoples. Other chapters treat of curious customs and beliefs in connection with bees, and the state of bee-culture at the present.

The postpaid price of this captivating book is $1.50; or we will club it with the Bee Journal for one year—both for only $2.25; or we will mail it free as a premium to any one sending us *four new* subscribers to the Bee Journal with $4.00. It is an intensely interesting volume, and should be in the library of every bee-keeper who wishes to know all there is known about the bee both in ancient and modern times. It would make a fine Holiday gift.

The Weekly Budget

Speaking of the Selser Family, the editor of Gleanings in Bee-Culture quotes from this journal an item about Mrs. Selser as an expert honey-bottle labeler, and then says:

"It is a little risky to say something nice of another man's wife; but I will say this much: Those of us who had the honor and privilege of being entertained at Mr. Selser's home, realized that his 'better half' is not only a queen in a bee-keeper's home, but a royal entertainer."

* * * * *

Miss "Flody," the young lady who was Mr. J. A. Golden's expert assistant the past few years in his work with the bees, was married Oct. 29, 1899, to Mr. Wm. McConnell, a highly esteemed young dry goods merchant. Our readers will remember "Flody" as the one shown in the American Bee Journal as the operator of a section-cleaning machine.

'Tis said, "Where there's a *Will* there's a way." We wish her and her "Will" a long and happy *way* thru life.

* * * * *

Dr. A. B. Mason, of Lucas Co., Ohio, writing us Nov. 18, said:

"We've had a splendid warm autumn, and it is still warm. Last night we put our bees into the cellar, with the thermometer at 50 degrees, and when I got up this morning it was 54 degrees, and now at 10:30 a.m. it is 65 degrees."

In the same letter, Dr. M. said that he and Mrs. Mason were that day celebrating their 41st wedding anniversary, and the Doctor's 66th birthday, with a nice dinner, and wisht we could be there, too. We appreciated the invitation, even if it was received several days after the event took place. But as the Doctor exprest his regret for the delay in inviting us, we'll forgive him this time if he'll promise not to do it again. We wish both Mrs. and Dr. M. many happy returns of the "two days in one."

* * * * *

The Canadian Bee Journal has for some time had no name as editor at its mast-head, but has now secured W. J. Craig as editor. There has been some discussion as to whether the Ontario Bee-Keepers' Association should not obtain full control of the journal, but its members are divided in their opinions. Whatever may be the performance of Mr. Craig as editor, here's a part of his salutatory that has a good ring to it:

"We want our bee-keeping friends to understand right now that the Canadian Bee Journal will be largely what they make it.

"Some one has spoken about taking the journal out of the hands of people having 'axes to grind.' Mr. Yeigh has replied on behalf of the company. As for the editor, he hasn't got an 'axe,' and would at this juncture suggest a wholsesale burying of axes, hatchets, and everything of the sort, and let us begin at the coming convention 'a long pull, and a strong pull, and a pull altogether.'"

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We handle not only on commission, but **WE BUY OUTRIGHT** as well, from small lots to carloads, for spot cash.

If you prefer to sell your product, write us, stating quantity you have, quality, and how put up, and we will make you our cash offer.

We shall be glad to correspond with you in regard to your crop, and hope to have the pleasure of hearing from you soon.

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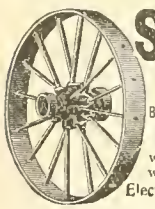

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John Bauscher, Jr., Box 94, Freeport, Ill.

42E13t Mention the American Bee Journal.

BEEDOM BOILED DOWN

In Nailing Frames, if they are inclined to split, dip the ends a short time in hot water. This will not only prevent splitting, but the moisture will rust the nails and make them hold more firmly.—Centralblatt.

The Cure of Foul Brood by Drugs finds no great favor in this country, altho reports of cures thereby find place from time to time in foreign journals. In Revue Internationale one writer strongly commends the use of formaline, while another claims success in mild cases by using smoke alone. He smokes the infected colony three times a week, blowing 30 to 50 blasts of smoke into the hive.

Outlet for Fermented Honey.—Chalon Fowls, the man who got up so many cooking recipes, says that honey partly fermented is the very best for cooking purposes. Indeed, some bakers endeavor to get their honey into a ferment before they use it. Here is a hint for bee-keepers who may have honey on hand otherwise good but a little fermented. There is hardly a doubt that many a baking concern will take honey fermented, even in large lots.—Gleanings.

Simmins on Foul Brood.—S. Simmins, editor of the English journal Bee-Chat, asserts that under normal conditions, except when swarming, or when frightened so as to fill up on honey, a bee from a colony affected with foul brood going from its own hive to a hive with a healthy colony, *never carries the disease with it.* In proof of

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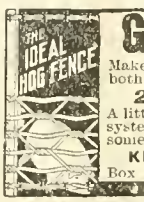

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40Atf Please mention the Bee Journal

Bee-Keeping in Colorado.

It is generally conceded that Colorado is one of the leading honey-producing States, and the opinions of its bee-keepers should have weight alike with bee-editors and supply-dealers. Realizing this, Editor E. R. Root is now attending the annual Colorado Bee-Keepers' Convention, at Denver, to become better acquainted with the Western bee-keepers and their methods. The readers of Gleanings in Bee-Culture will get the benefit of this in forthcoming issues. He has with him, of course, his camera, so as to present to our subscribers views of the West as he saw them. The first installment of these writings may be expected in our Dec. 15th issue.

Other Leading Bee-Keepers.

Gleanings in Bee-Culture Oct. 15th contained a biographical sketch of the most extensive bee-keeper in the world, Capt. J. E. Hetherington. This is followed in Dec. 1st issue by biographical sketches, with portraits, of the Coggshalls, David and W. L. In this article will be a discussion of the 4-frame non-reversible extractor, with which Mr. W. L. Coggshall and his "lightning operators" have made such phenomenal records. Special features of Dec. 15th issue will be given in this column next week.

Our rates for Gleanings in Bee-Culture are:

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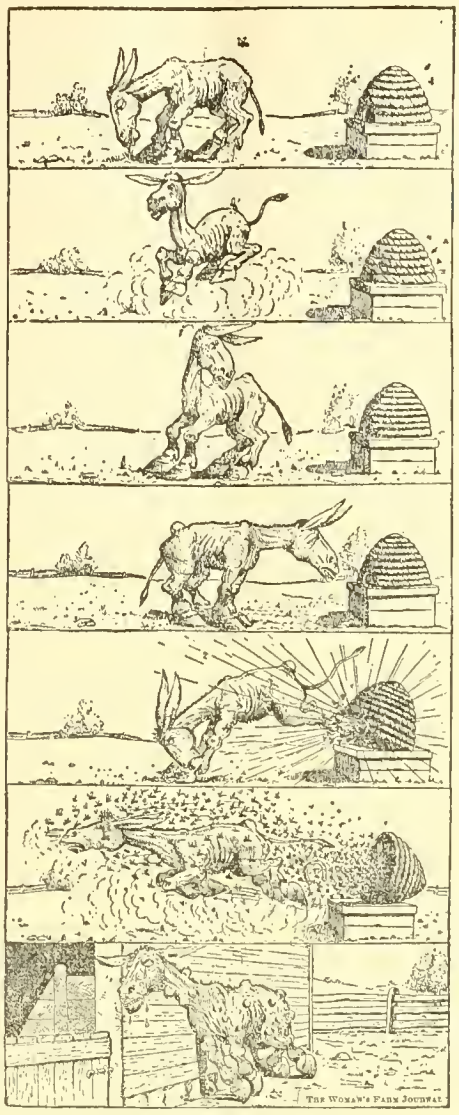
A Stinging Revenge.



"The Value of Illustrations."

This is the subject of an editorial in a recent issue of Gleanings in Bee-Culture, in which appears this sentence:

"We realize the fact that it takes time to read, and where we can give information by pictures, we will illustrate regardless of expense."

In the same number that contained the above, there was also the illustration shown herewith, which Gleanings has kindly loaned us for this occasion. We wanted it for two reasons, viz: 1st, for the genuine amusement which it will furnish our readers; and, 2nd, that we might give a sample of the class of pictures some excellent papers use to save the *time* of their readers, for doesn't Editor Root say "it takes time to read?" and, he also says that where *they* can "give information by pictures," they will use them, no matter if it "busts" the bank! Just think of the *time* it would take to *read* all about the exciting things this illustration shows at a glance—or say seven glances! Then, consider the vast amount of boiled-down information these graphic pictures furnish in so small a space!

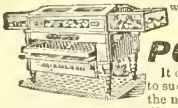
P. S.—We presume we really ought to beg Editor Root's pardon for the above, but it seemed too good a chance to get off a harmless joke on him to let it pass by. To show our willingness to let him have "sweet revenge" on us, we will say that he can at any time return in kind—but remember, we don't advise the "stinging revenge" kind.

this he took a strong colony that was badly diseased and put it on the stand of a colony that was not strong but was healthy, putting the healthy colony on the stand of the diseased one. Altho most of the bees from the diseased colony entered the healthy one, this latter remained perfectly healthy. But he emphasizes the fact that in this experiment the bees were not first smoked or in any way intimidated.

Room Needed for Evaporation.—Leon Dufour, in L'Apiculteur, makes a plea for large hives and plenty of surplus room on a ground that is perhaps not always considered. The more the nectar can be spread out in the combs the more rapid can evaporation take place. If a strong colony has only two combs in which to store, those two combs may hold more than can be stored in a day; but evaporation would take place more rapidly if the same plunder were distributed over ten combs, and the bees thus aided in their work.

Selection in Breeding seems to be getting unusual attention nowadays in the Bee-Keepers' Review, and this time it is selection for quality rather than for color. Editor Hutchinson quotes Dr. Miller as saying that if we mark on each super the number of the colony from which it was taken, we may know where to replace next spring a queen whose workers produced

A SONG OF SUCCESS



would make another good name for our **20TH CENTURY POULTRY BOOK**

It deals with all those subjects which tend to success in the poultry business, treated by the masterful hand of experience. No subject neglected, it hits them all. It's practical; can be adopted by everybody in the poultry business. Tells about the renowned Reliable Incubators and Brooders. Book sent for 10c to cover postage.

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Before placing your order, to send me a list of what you need in

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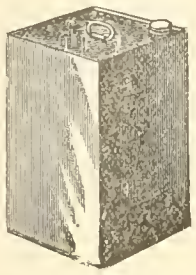
And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis



BEST WHITE

ALFALFA HONEY

In 60-pound Tin Cans.

WE have been able to secure a quantity of WHITE ALFALFA EXTRACTED HONEY which we offer for the present at these prices, on board cars here in Chicago: Sample by mail, 10 cents; 2 60-pound cans, in a box, 9½ cents a pound; 4 or more cans, 9 cents a pound. **Cash with order** in all cases.

Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

GEORGE W. YORK & CO.,
118 Michigan Street, CHICAGO, ILL.

greasy looking sections, and thinks there are other points that might well be lookt after. Dr. Whiting found a colony that built but little brace-comb. Requeening his apiary from the queen of this colony, he was practically rid of the brace-comb nuisance. Mr. H. thinks this the right kind of work for those with few colonies; those with large numbers having more profitable work to do.

Packing for Out-Door Wintering.—A good many questions are askt by our subscribers as to what kind of packing is best for out-door wintering. We formerly thought there was nothing equal to good dry wheat chaff. While this is perhaps the best, it is not always available. We have used with equally good results common shavings, such as one can get at the planing mill. Dry forest leaves, if enough of them are used, are also good. Sawdust and clover chaff make a packing material a little heavy, and is liable to become pretty damp in the spring, and too moist for the cluster. The best packing material is that which is loose enough so the air can pass thru it, carrying with it the moisture.—Gleanings.

Honey-Packages are again discust in Gleanings. "The American Tramp" pleads the cause of kegs. The honey-gates that may be had with tin cans he considers practically useless, for the honey, if of proper thickness, will be too slow in running out. An objection to the tin can is that unless thoroly cleaned and dried as soon as empty, the little honey left in it will turn black and leave a peculiar scent that cannot be removed. What he thinks would make the best package is a wood-fiber or paper package, with no staves or hoops, but all in one piece. The editor replies that while kegs may be more convenient for the seller, tin cans are better for the buyer. He approves of the wood-fiber or paper package if it could be found at a sufficiently low price.

Doolittle Cell-Building.—A picture appears in Gleanings showing queen-cells from which the queens had emerged. They were the product of W. H. Pridgen. In one case the whole 18 cells were completed by black bees over a young queen; in the other case 15 of the 18 were completed over an old three-banded queen mated with a golden drone. June 21 he gave to bees without unsealed brood a comb of eggs with not more than half a dozen larvæ with food around them to be seen. The next day many larvæ were abundantly supplied with milk. At 10 a.m. that day, from combs over an excluder having brood in all stages, he shook the bees into a hive with combs of pollen and unsealed honey, confining them with a screen. About 3 p.m. the prepared cups were given, and the next morning they were put in upper stories over laying queens (over excluders), and the queenless bees allowed to return to their home. He cannot get fine cells with larvæ much over one day old. His best queens emerge in 11½ to 12 days. For the first day, queenless bees will do as much at feeding and cell-building as will be done over an excluder in two days, but in the home-stretch the bees over the excluder are ahead.

Foul Brood Cured Without Destroying Combs.—In Bee-Chat, Editor Simmins reports the case of a colony with a native queen which was badly diseased with foul brood, and says:

"At the middle of a warm day the hive was lightly smoked and the queen removed, so that she might be left in a clean hive on the old stand, with foundation in the frames, to collect the flying bees. They were given one frame of healthy capt brood as well, while the original hive of combs was removed to some distance. The young bees in the latter were without a fertile queen for some three weeks, by which time they had a Carniolan laying, from a queen-cell given them. In the interval, honey coming in rapidly, the whole of the diseased matter was cleaned out by the young bees; and after the young queen started laying everything continued so satisfactory and perfectly clean that another division of the colony was made in July. The first swarm continued to build up nicely, and no sign of disease was at any time evident. Turning a diseased colony into three strong and healthy colonies was certainly better than destruction.

"This is only one example of others that were treated in precisely the same way, making healthy increase instead of destroying the original; but it must be borne in mind that no bees were shaken from the combs, the whole hive was removed with as little disturbance as possible, the operations were carried out with the colonies before they were allowed to become seriously depopulated; the time was favorable for swarming and rapid honey-gathering; lastly, but almost more important than all, there remains the fact that the diseased combs were covered with none but young bees, and these, being queenless for a period, cleaned out every vestige of the disease before the young queen again made up a brood-nest.

"Make a note of this last fact in big cap-

SUFFERERS
FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO,
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☞ Write at once, stating age, sex, occupation, how troubled, post-office address, and enclose return stamp for immediate reply.

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POUDER'S HONEY-JARS and everything used by bee-keepers. Prompt Service—low freight rate. Catalog free. WALTER S. POUDER,
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and pay for it before giving it a trial. We will send the celebrated NEW PREMIER INCUBATOR on trial. This evidences our faith in it. So simple a child can run it. First prize World's Fair. Also sole manufacturers of Simplicity Incubator. Catalogue and Poultry Helps 5 cts. Plans for Poultry Houses etc., 25 cts.
COLUMBIA INCUBATOR CO.5 Adams St. Delaware City, Del.
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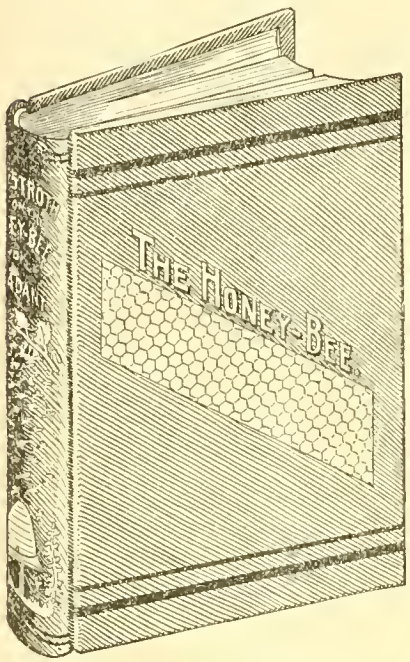
Queen-Clipping Device Free....

The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,
GEORGE W. YORK & COMPANY,
118 Michigan St., Chicago, Ill.

Langstroth on... The Honey-Bee

Revised by Dadant—1899 Edition.

This is one of the standard books on bee-culture, and ought to be in the library of every bee-keeper. It is bound substantially in cloth, and contains over 500 pages, being revised by those large, practical bee-keepers, so well-known to all the readers of the Ameri-



can Bee Journal—Chas. Dadant & Son. Each subject is clearly and thoroly explained, so that by following the instructions of this book one cannot fail to be wonderfully helpt on the way to success with bees.

The book we mail for $1.25, or club it with the American Bee Journal for one year—both for $2.00. But, as a **SPECIAL OFFER,** and only until next Jan. 1, we will mail this book for only 75 cents provided you send enough on your Bee Journal subscription to pay all arrearages and to the end of 1900. Those having already paid their Bee Journal subscription to the end of this year, need send only $1.75 for the book and the Journal for 1900. This is a splendid chance to get a grand bee-book for a very little money.

ADDRESS,

George W. York & Co.

118 Michigan St., - CHICAGO, ILL.

ital letters, for we have never known bees (with a virgin queen), when fairly numerous, to refuse to clear out all evidence of disease during the active season of honey-gathering."

GENERAL ITEMS

A Good Report for 1899.

The past season opened with the best of prospects, and the bees were making preparations for swarming, when behold! a heavy frost killed the blossoms, and set back swarming—the bees killing off every drone. But when Alsike clover opened, they made up for lost time, giving nearly 100 pounds of nice white honey per colony. That was about all I got, for the drouth and heavy early frosts finisht the fall flow, the bees getting hardly enough to winter on. My crop is 3 000 pounds from 35 colonies, and increasing to 56.

I. D. BARTLETT.

Charlevoix Co., Mich., Nov. 20.

Lost All Last Winter.

I lost all my bees last winter—19 colonies—and got about 200 pounds of honey from two colonies that I bought in the spring, and increast them to ten. I did not get any surplus honey the past fall. But I am not discouraged, as I like to handle bees.

R. H. BERGFELD.

Hardin Co., Iowa, Nov. 20.

A Poor Year for Honey.

This has been a poor year for honey in my locality, having taken but six pounds from 11 colonies, but I did not have to feed any. This is my second year in bee-keeping and I hope, with the help of the American Bee Journal, and the A B C of Bee-Culture, to make a success of the business.

T. L. POWERS.

Alleghany Co., N. Y., Nov. 19.

Poorest Season Known.

Failure is the one word in use among bee-keepers thruout this section in regard to the product from the apiary, and by far the poorest season ever known. However, we are blest by our bees having winter stores without feeding. I am hoping for the prosperity of the apiarist in 1900, following in the wake of prosperity of other industries thruout our land, and wish the Editor of the American Bee Journal a pleasant closing of 1899, and a busy and prosperous entry of 1900, soon to be ushered in. J. S. HARTZELL.

Somerset Co., Pa., Nov. 20.

Three Successive Failures.

My honey crop was a sad failure for 1897, 1898 and 1899—three short crops in succession—only 600 pounds of comb honey and 100 pounds of extracted from 75 colonies. First it was too wet and then too dry.

D. F. BLIGHTON.

Fulton Co., N. Y., Nov. 16.

A First Season's Experience.

This was my first season as a bee-keeper, and I like the business very much, but I would not care to keep bees (if I could) without the American Bee Journal. I take five other papers (not all bee-papers), but I like the Bee Journal the best.

There was a fair fall crop of honey here from heartsease—no clover or basswood honey. Nice comb honey brought 15 cents very readily.

I started with one colony, and bought three swarms in May and June, increast them to eight, and got 170 pounds of comb

HATCH with the perfect, self-regulating, lowest priced first class hatcher—the **EXCELSIOR Incubator**

Hatches the largest per cent. of fertile eggs at the lowest cost.

Circulars free. Send 6c. for Illus. Catalog.

GEO. H. STAHL, Quincy, Ill.

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The Mississippi Valley Democrat —AND— **Journal of Agriculture,** ST. LOUIS, MO.

A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

It stands for American farmers and producers. It is the leading exponent of agriculture as a business, and at the same time the champion of the Agricultural States and the producer in politics. **Subscription, One Dollar a Year.**

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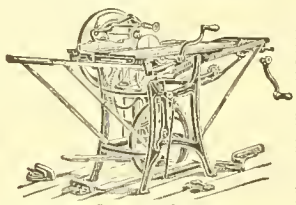

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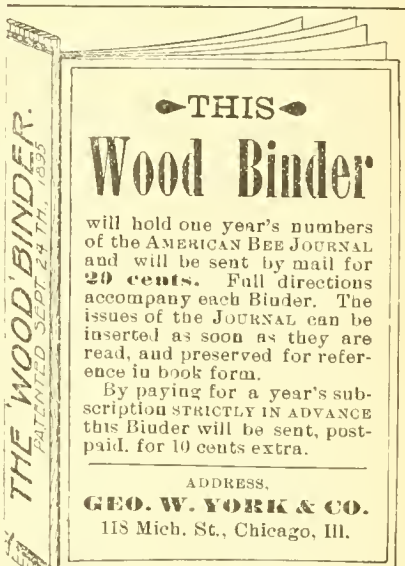
Seneca Falls Mfg. Co., 46 Water St., Seneca Falls, N.Y.



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will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

J. A. VAN DEUSEN,

Sole Manufacturer,

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If you are interested in Sheep in any way you cannot afford to be without the best Sheep Paper publisht in the United States.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

HOW TO GET THE MOST EGGS

is the question that confronts the poultryman. Particularly is this true in the winter when eggs are scarce and high in price. Experienced poultry people have solved the problem to their entire satisfaction and profit. They feed the hens **Green Cut Bone** prepared with **MANN'S NEW BONE CUTTER** and thereby get double the eggs. Cut all kinds of bone and adhering meat and gristle fast, fine and easy and without choking. Add **MANN'S CLOVER CUTTERS** Mann's Granite Crystal Grit and Swinging Feed Trays and you can't help but succeed. Write now for our FREE illustrated catalogue

F. W. MANN CO. Box 77, MILFORD, MASS.

Please mention Bee Journal when writing.

OUR MOTTO: WELL MANUFACTURED STOCK—QUICK SHIPMENTS.

Sections, Shipping-Cases and Bee-Keepers' Supplies

We make a specialty of making the very best Sections on the market.

The BASSWOOD in this part of Wisconsin is acknowledged by all to be the best for making the ONE-PIECE HONEY-SECTIONS—selected, young and thrifty timber is used.

Write for Illustrated Catalog and Price-List FREE.

Marshfield Manufacturing Company,

Please mention the Bee Journal when writing. MARSHFIELD, WISCONSIN.

G. B. LEWIS COMPANY,

WATERTOWN, WIS.,

CAN FURNISH YOU WITH THE VERY FINEST

Bee-Keepers' Supplies

IN THE WORLD.

Parties wanting goods before new catalog is issued will please write for quotations. We want every BEE-KEEPER on our list.

If you did not receive our catalog last year send us your name and address and we will mail you our new catalog as soon as it is ready.

THE LOSS OF AN EYE —terrible calomity. The tip of a horn often does it in tying up cattle. Cut off the horns quickly and humanely with the **Keystone DEHORNING Knife** Cuts on four sides, no crushing or tearing. Highest Award World's Fair. FULLY GUARANTEED. Write at once for descriptive circulars, prices, etc. A. C. BROSIUS, COCHRANVILLE, PENN.

Please mention Bee Journal when writing.

Page & Lyon Mfg. Co.

NEW LONDON, WIS.,

Operates two Sawmills that cut, annually, eight million feet of lumber, thus securing the best lumber at the lowest price for the manufacture of ..... **Bee-Keepers' Supplies....**

They have also one of the **LARGEST FACTORIES** and the latest and most improved machinery for the manufacture of **Bee-Hives, Sections, &c.**, that there is in the State. The material is cut from patterns, by machinery, and is absolutely accurate. For Sections, the **clearest and whitest Basswood** is used, and they are polisht on both sides. Nearness to Pine and Basswood forests, and possession of mills and factory equipt with best machinery, all combine to enable this firm to furnish the **BEST GOODS AT THE LOWEST PRICES.**

Send for Circular and see the prices on a full line of Supplies.

24 cents Cash paid for Beeswax.

This is a good time to send in your Beeswax. We are paying **24** cents a pound—CASH—for best yellow, upon its receipt. Now, if you want the money PROMPTLY, send us your beeswax. Impure wax not taken at any price. Address as follows, very plainly,

GEORGE W. YORK & CO., 118 MICHIGAN STREET, CHICAGO, ILL.

Please mention the Bee Journal when writing Advertisers.

honey, in tall sections, 3⅝x5. The bees have plenty for winter, if 8-frame hives will hold enough.

I was just going to ask a question, but upon picking up the Bee Journal of March 9, 1899, I found Dr. Miller had answered it.

GEO. A. OHMERT.

Dubuque Co., Iowa, Nov. 20.

An Old Bee-Keeper.

I have been more or less in the bee-business since 1849. In moving several times I sold my bees, but now I have a new supply again. I cannot afford to stay out of the bee-business, nor do without the Bee Journal.

I have a new machine to fold sections. I set it on the table, and can fold them as fast as I can handle them—no breaking.

Darke Co., Ohio, Nov. 18. H. BLACK.

Hard On California Bee-Keepers.

We California bee-keepers have a hard time of it. We have had two seasons of failure in succession, and the coming season is not promising. We have lost all our work and 50 percent of the bees, and have the expense of feeding the balance. Last season they stored a little surplus honey, but it will take all that, and perhaps more, to carry them thru the winter. I estimate that by the time the next season opens, taking in the last two seasons, 70 percent of the bees in Southern California will have perisht. We bee-keepers had to hustle around to get other jobs in order to make a living C. B. SCHROCK.

Riverside Co., Calif., Nov. 14.

Bees in the Cellar.

The American Bee Journal is all right. We have just put all our bees into the cellar. We had three inches of snow yesterday morning, but each one of our hives has a good-sized cover over all to keep off the sun and storm, so they were just as dry as before the storm. MISS MYRA SNYDER.

Ulster Co., N. Y., Nov. 16.

More than Enough for Wintering.

My bees brought in honey during September and October—honey from white sweet clover and buckwheat, enough for wintering and for family use.

CONRAD DIPPEL.

Jefferson Co., Wis., Nov. 18.

No Honey This Year.

Our bees did not produce any honey this season, and a great many colonies were entirely lost in August; they are mostly all very light in bees to go into winter.

J. V. HINCHMAN, M. D.

Thayer Co., Nebr., Nov. 15.

Euphorbia—Is It a New Plant?

A neighbor of mine recently called my attention to the honey-producing qualities of a plant called "Euphorbia," which his wife was raising for the seed, which she sells to florists, as it is a very ornamental plant and will remain fresh for a long time if kept moist; some branches, with flowers, that I broke off about four weeks ago and placed in water continued to yield honey for a whole week, and are yet fresh and green.

The flowers are very peculiar. There are no petals, but the leaves which surround them are either entirely or partly colored a bright red. The first appearance of a flower is a small knob about the size of a grain of wheat, on the side of which is attacht an oval-shaped cup in which the nectar is secreted. At the end of the knob appear the stamens and pistils, and later a pod attacht to a short stem and containing three seeds. When ripe, the pod bursts, and throws the seeds sometimes a rod or two. The bees revel on the blossoms from morning till night, and in this locality

from July till frost, which usually comes about the last of November.

The plant seems to be easily raised, and is almost as succulent as cabbage, being greedily eaten by cows and other animals. It seems, at present, to be very rare, and I thought it would be well to bring it to the notice of bee-keepers, as it seems quite likely to prove valuable as a honey-plant, especially in the South, as well as useful for other purposes.

My neighbor informs me that there are two varieties of euphorbia—the red and the white—he has the red. The red is at present quite costly, about $10 a pound, and not much to be had at that price. I think that only a few of the florists keep it or know of it. If any one else has any further knowledge of this plant, I, for one, would like to hear from him thru the American Bee Journal.

T. W. LIVINGSTON.

Sumter Co., Ga., Nov. 13.

[We should be pleased to publish any further information concerning the plant mentioned by Mr. Livingston.—EDITOR.]

The Successful Carying On of the modern farm requires the utilization to the fullest extent of all its products. In order to make the most of farm possibilities, it is necessary to have modern machinery, not only in the grain-field, in the barn, and in the house, but also in the poultry department. Here we find incubators to have become a necessity, and the only question which the farmer now asks is as to the machine which will do him the best service at the most reasonable price. In this connection we wish to mention the Successful Incubators and Brooders made by the Des Moines Incubator Co., of Des Moines, Iowa, whose advertisement will be found in another column of this paper. Brooders of all sizes are also made and sold at reasonable prices. The new 1900 catalog which has just been issued is a very complete affair in all its departments. It describes and illustrates every machine sold by this company, and does it so well that the buyer can make his selection with almost the same certainty as if he had the machines before him. It also contains the usual proportion of valuable poultry reading. We advise every reader of this paper to send for it. It costs 6 cents. Address the Des Moines Incubator Co., box 78, Des Moines, Iowa, and kindly mention the American Bee Journal when ordering.

Convention Notice.

Minnesota.—The Minnesota Bee-Keepers' Association will hold its 11th annual meeting at the Court House in Minneapolis, Wednesday and Thursday, Dec. 6 and 7, 1899.

J. P. WEST, Pres., Hastings, Minn.
DR. L. D. LEONARD, Sec., Minneapolis.

IF YOU WANT THE

BEE-BOOK

That covers the whole Apicultural Field more completely than any other publisht, send $1.25 to Prof. A. J. Cook, Claremont, Calif., for his

Bee-Keepers' Guide.

Liberal Discounts to the Trade.

California! If you care to know of its Fruits, Flowers, Climate or Resources, send for a sample copy of California's Favorite Paper—

The Pacific Rural Press,

The leading Horticultural and Agricultural paper of the Pacific Coast. Publisht weekly, handsomely illustrated, $2.00 per annum. Sample copy free.

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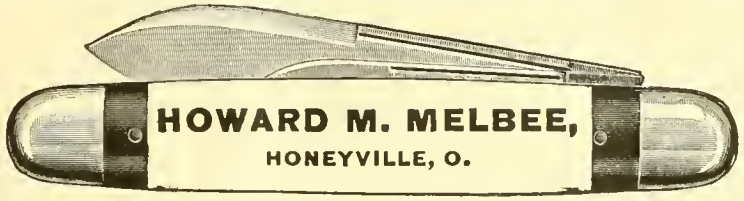
Read "The Corn Belt," a handsome monthly paper, beautifully illustrated, containing exact and truthful information about farm lands in the West. Send 25 cents in postage stamps for a year's subscription to THE CORN BELT, 209 Adams St., Chicago.

Please mention Bee Journal when writing.

The Novelty Pocket-Knife

(A heavier and stronger knife than the one we offered heretofore.)



(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

GEORGE W. YORK & CO., 118 Mich. St., Chicago, Ill.

HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 24.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13@14c; amber, 10@12c; and dark to buckwheat, 9@10c. Extracted white clover and basswood, 8@9c; amber, 7@8c; dark, 6@7c. Beeswax, 27c.

R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth.

KANSAS CITY, Nov. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

BUFFALO, Nov. 6.—Actual supplies in Buffalo are smallest for several seasons at this date. Strictly fancy 1-lb. comb, active, 15c; No. 1 and choice, 13@14c; dark, buckwheat, etc., 8@12c, as to grade. Beeswax, 27@28c. BATTERSON & Co.

SAN FRANCISCO, Nov. 8.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Nov. 7.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

We are pleased to note that our market continues in splendid condition. While the supply is light, yet, owing to the high prices, it seems to be quite equal to the demand. Later on when the trade realizes the shortage more thoroly the demand undoubtedly will be much better.

BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.

MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Nov. 18.—The November trade has up to the present not been as good as was expected, and shows a falling off from October. It seems that the somewhat higher prices this fall are affecting the consumptive demand to some extent, still the warm weather yet prevailing in this part of the country may also be partly responsible for it. While trade has been light, prices have been well maintained, nobody being burdened with stock to such an amount as to become oppressive.

Fancy white still going at 14@14½c, and light amber 1 cent less. Extracted, white, 8@8½c.

PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.

M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.

R. A. BURNETT & CO.,
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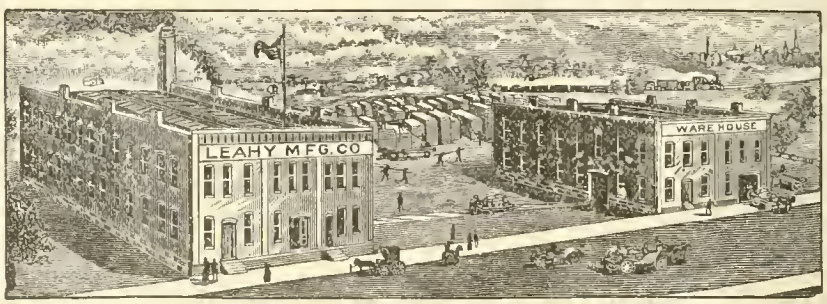

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DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

39th YEAR. CHICAGO, ILL., DECEMBER 7, 1899 No. 49.

CONTRIBUTED ARTICLES

A Nebraska Apiary and Its "Boss."

THE picture of my spiary sent herewith was taken last June. The "old man" in the foreground, with hat in one hand and smoker in the other, is the Boss (that's I). The corner of the building to the right is the corner of the shop and honey-house. The low shed building at the right in the background is where I store bees for winter. It fronts south, and holds one row of hives. I set the hives about three inches apart, and pack short hay or straw all around and over them. The front is closed, all except three inches at the bottom.

In preparing for winter I first take the sections out of the supers, and have boards cut to fit down on the brood-frames, nail cleats on the ends of the bottom for a bee-space above the frames, and bore 15 to 20 holes thru the board for ventilation, and for moisture to pass thru. I pack the super with a chaff-cushion, pieces of old quilts, or anything of the kind at hand, and have no trouble with bees freezing.

The trees shown are cherry, crab-apple and apricot. There is a large orchard west and north of the yard, and dwelling and other buildings south and east. The picture does not show all the hives, several being hid by the shrub on the left.

My bees increast from 13 colonies, spring count, to 32, by natural swarming. During fruit-bloom and first crop of alfalfa they did well. The second crop of alfalfa was spoiled by the cabbage butterfly, and dry, windy weather almost ruined the fall pasture, so I will have but little honey to sell this year. It is selling at 12½ cents per section.

I should have stated that all but the hive in front stand in three rows, running north and south. The picture was taken from the southeast.

I hope for a better season next year, and the continued prosperity of the "Old Reliable." I. H. PAGE.

Thayer Co., Nebr.

The Outdoor Wintering of Bees.

BY F. A. SNELL.

TO winter our bees with any great degree of certainty good protection must be given in our Northern States. In mild winters like we have had the few years past, bees will winter with some degree of success, but the wise bee-keeper will trust to no such way of doing business, as it is very risky, and more food will be consumed than when the bees are kept warm and comfortable at all times, which can only be the case when the bees are well packt with some warm material, as wheat, oat, buckwheat, or clover chaff, or planer-shavings. When thus packt with any of them on all sides, and on top, with a little upward ventilation given to the hives, the bees should winter well, where good stores are at hand, and a good supply of young bees

Mr. I. H. Page and his Apiary, in Thayer County, Nebraska.

are reared in the early fall so the colonies are composed largely of bees reared during September and early October.

For many years I have packt about 40 colonies each fall to winter out-of-doors. Of course, different methods have been tried with varied successes and failures. The new ways were tried with a few colonies only, as I have held fast in the main to that which had proven good, until I found something which proved better after a trial of at least three winters, knowing that one winter only is a very slight test of any method.

One experiment made some 25 years ago with three colonies proved a perfect failure, as the bees all perisht before warm spring weather came.

It is said with much truth that we often learn more from our failures than from our successes. I know this was a good lesson to me, and has been kept well in my mind ever since.

I have a shed 80 feet in length, 2½ in width, and 2½ high at the eaves. Posts are set 8 feet apart, to which the front, back and roof joists are fastened. The front and back are of shiplap lumber, so fastened as to exclude all storms. The roof is made of wide boards of good quality, which should be kept well painted to exclude all storms. These roof-boards, as well as front and back boards, are 16 feet long, running lengthwise of the bee-shed or house, as one pleases to style it.

A rack made of 16 feet fence-boards with cross-pieces 4 feet apart, into which nails are driven thru the fence-boards, afford strong stands upon which the colonies stand during winter. During summer I have a row of hives standing about two feet from this shed and in front of it. The shed or bee-house faces the south, so the bees may get the benefit of the sun when flying from their hives during winter.

In placing the bees for winter, the front and roof are easily removed. The chaff packing is thrown over onto the roof at the north side of the shed. The hives are then set on the rack in the shed, a few at a time, or all, as preferred by the apiarist. I usually put in one length, and then fasten on the front to the shed; next pack the chaff in front, between, and at the back of the hives. A frame covered with wire-screen is placed on top of the brood-chamber over the top-bars, and chaff packt on top of the hives and solid up to the roof of the house, which is then placed on for winter, excluding all storms.

The next length of the house is then filled, setting the hives near the shed back of where they were during the summer, and bring other hives from any near-by part of the yard to fill up all the available space in the house. The work is continued until the space is filled, and closed up for winter.

A passage-way is given the bees over the top-bars, under the screen; the latter excludes all mice, and permits the moisture from the bees to pass off, leaving the hives and combs dry, and at the same time retaining the heat of the bees mostly within the hives. Too much importance cannot be put on keeping the bees, hives, combs and food dry and warm during winter.

An entrance-way is given the bees to and from the hive by placing a piece of ½ or 1 inch board the width of the hive in length, and 4 inches in width, nailed to ⅜-inch strips 4 inches long, and laying these pieces of boards flat at the hive-entrance with the cleats down. The packing at the front of the hives rests on top of these, and the bees pass under in going out or in.

The width of entrance to the hive can be varied to suit the wishes of each bee-keeper. I am not fully decided as to just what is the best width, but for strong colonies I think 6 to 8 inches in width by ⅜-inch deep is about right. I have tried widths from 1½ inches to full width of my hives, which is 15 inches in the clear.

Such a house as here described, with good, careful packing, I think can only be surpast by a good, dry cellar, in any Northern winter or cold climate, for safe wintering of bees.

During winter at least, the hives should tip forward so as to run off the moisture if any accumulates on the hive-bottom.

The hive-covers are left off during winter with my methods of wintering bees, either in the cellar or out-of-doors.

There are some advantages that may accrue from wintering a part of our bees in the cellar and a part outside. Should our house burn down during winter, and our bees be all stored in the house-cellar, we would meet with the loss of all our bees, when, if a part are packt outside, they would probably be spared, and a nice start could be made the following season, if it should prove a fair one. With 40 colonies in the spring, and a good season, the number could be increast to 80 or 100 by fall, and some little surplus honey secured, with good management.

During mild winters the flights had by the outdoor bees are pleasing, and, if the stores are not very good, quite beneficial.

I have used, on a small scale, chaff hives for wintering, but on the whole I do not like them. These hives are unhandy to work with in summer, and the packing becomes damp, and, too, seems to furnish a place for ants and their nests. However, I have not tried the later patterns or styles.

Carroll Co., Ill.

"Hundred-Dollar Queens"—Historical.

BY HENRY DIDWELL.

ONE April day, some years ago, I sent Rev. L. L. Langstroth $25 for one Italian queen, and while I was waiting for her arrival I removed a German queen from one of my strongest colonies, and the drone-comb from all the others, replacing it with worker-comb.

The queen arrived by express about May 10, costing $3.75 for charges. I introduced her into the queenless colony, and in the course of one month her worker-brood appeared in great numbers, and some ten days later drones appeared about the time I first found eggs in the queen-cells. These queen-cells I removed, replacing them with cup-cells from the other hives, and gave the cells with eggs in, one to each of the strongest colonies, first removing the queen the day before and subsequently destroying all the other cells. I also removed the drone-combs as fast as the queen laid in them, and put them into the strongest colonies to mature, replacing them with drone-comb. With all my care I found some drones of the brown variety in a number of hives, but I have this to relate, that the young queens were more apt to mate with a similar drone to those in her hive.

From the Langstroth queen I reared 302 queens, and sold her in August for $20.

The yellow bees did twice as well as the brown ones on account of their superiority, which was principally due to their greater prolificness, the yellow queens laying 4,000 to 5,000 eggs a day in the working season, while the brown queens laid about 2,000; and I had to double the capacity of the hives the yellow queens were in by giving them an additional story, which they occupied with brood. This enabled the yellow bees to reproduce themselves so that the young queens were as good as the mother queen, and this is the secret of getting and preserving $100 queens.

A mile south of where I lived was a long lake, ¼ mile wide, beyond which the brown bees could not be found, but the yellow bees flew across and brought back some 2,000 pounds of thistle honey the first season I got them, and I was satisfied that they doubled my yield of honey. To avoid in-breeding, I offered Mr. Langstroth $100 for another queen as good as the one he had sent me, but I subsequently learned that Nature had provided a remedy to offset the evil effects of in-breeding, by feeding the males and females different kinds of food to grow them apart, so they could be bred together.

My yellow bees were very uniform in color, but I noticed an occasional bee more clear and transparent than the others, and it occurred to me that if I could get queens from these eggs they would be more yellow, and after three years of careful selection I got rid of the brown on the end of the queen, but, unfortunately, in wintering my bees in trenches, in Minnesota, a gopher got in and filled the trench with dirt, and I lost what I had gained there. I have been trying the same experiment here, and have succeeded in producing, the past season, three queens purely mated, all yellow.

Sedgwick Co., Kan.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 758.]

INFLUENCE OF CLIMATE ON HONEY.

Pres. Whitcomb then gave the following explanation:

"In some remarks made at the Omaha convention relative to the influence of climate on honey, I was slightly misquoted, as these remarks were only intended to compare the effects of climate on the kinds of honey produced in our own climate, and not to contrast our own honey with that produced in Texas, Florida, and other Southern States. I said that taking white clover, for instance, we were not able to compete in richness, density, and flavor with Minnesota, Wisconsin, northern New York and Canada. In our own State we have found that the best premiums are taken by the more northern counties, while in heartsease honey they were not able to compete with our own locality. I have been a newspaper man for more than 20 years, and know what a controversy thru the press means, and have foreborne making this explanation until this time in order to do full justice to the bee-keepers of the South, whose product I am little acquainted with, and whom I recognize as producing fine honey of their class, and which we could not hope to produce, or even make a comparison with any other produced anywhere. I am not at all surprised that these remarks, going out as they did, should be resented, but trust that my explanation will be received in the kindly spirit in which it is made."

The convention then adjourned until 1:30 p.m.

THIRD DAY—AFTERNOON SESSION.

The afternoon session was called to order by Pres. Whitcomb, and after singing the "Convention Song" and "The Hum of the Bees in the Apple-Tree Bloom," the discussion of Mr. Danzenbaker's paper was resumed.

THE HIVE DISCUSSION CONTINUED.

Dr. Miller—It is a little easy for us to make general statements that are hardly warranted. Mr. Abbott is generous with his ridicule. We want the masses, and I am of the mass. Perhaps it is a matter of locality. I have tried producing section honey without separators. I would like to dispense with the expense, but it costs too much to dispense with them. Mr. Danzenbaker says it is not wise to use hanging frames when we lose half the bees with them. I think sometimes it is a great advantage to have the hanging frames if we could use them without loss; but I cannot afford the loss. I don't lose half my bees, tho. These separate statements about this case and that case do no good.

Mr. Danzenbaker—How many did you lose last winter?

Dr. Miller—About half. I have two Danzenbaker hives, and the rest have open-end frames; part of them are Hoffman frames, and I wish they were in other frames. The two colonies in Danzenbaker hives were strong.

Mr. Hershiser—I have had a little experience with the Danzenbaker hive, perhaps more than some of you. I lost more bees last winter in double-walled hives than in the Danzenbaker single-walled hive. The objection I have is the bother of tinkering hives.

Mr. Coggshall—I have no closed-end frames. They are all hanging frames.

Mr. Stone—I would like to ask Mr. Danzenbaker a question. I have never used closed-end frames, but in turning the hives, won't they all run out?

Mr. Danzenbaker—Just reverse the sections and leave them there until the honey is ripe, then turn them back again. Bees get ahead of us sometimes.

Mr. Cook—To manipulate bees to the best advantage, use the reversible frames. I like the reversible frames for honey production. The best way to stimulate brood-rearing is by reversing. The honey will not run out. In shipping it is the jarring that breaks the comb. It is put in before it is ripe.

Mr. Stone—I am sure my honey was ripe, as some frames were put upside down, and the honey didn't run out. It moistens, or something.

Mr. Cook—I understand that if the bees put it there it won't run out.

Mr. Danzenbaker—Not if you turn it just a little.

Mr. Hahman—I would like to ask Mr. Cook a question. We all know that bees build right side up. When we reverse doesn't it stand the brood on its head, so to speak?

Mr. Cook—When bees build cells they build them at right angles, or nearly so.

Dr. Miller—When you reverse that will it trouble the queen about brood-rearing with that slant to it?

Answer—No.

Pres. Whitcomb—I believe Mr. Danzenbaker's hive is as good as anybody's hive. I have no choice. I believe when Father Langstroth invented his hive it was as nearly perfect as could be.

Mr. Poppleton—We want a different hive. I understand that this discusson is limited to comb honey.

Dr. Miller—Do you mean to say that a hive that is used for comb honey is not as good for extracted honey?

Mr. Poppleton—I do. Anything that is manufactured for a special purpose is better for that purpose than what is made for general purposes. I also think that we have different temperaments, and can do best with different implements. My experience is, that the long hive, single-story, is the best.

Dr. Miller—I believe that, perhaps, is the thought of a good many, and I don't believe that we can impress that too strongly on our manufacturers. They tell us, "You want a hive that will do for extracted honey, for some time you may want to use it for extracted honey," and in that way they have held my nose down to the grindstone. I am glad Mr. Poppleton is here.

Mr. Best—Isn't there something in the bees? I have supers for comb honey and supers for extracted honey, and I could see no difference. Both hives were filled with honey.

Dr. Miller—What kind of honey was it?

Mr. Best—White.

Mr. Stone—Put on two section supers.

Dr. Miller—I don't believe he extracts from the brood-nest. There is just as much distinction between these sections even tho they are up and down.

Jas. McNeill—How large are Mr. Poppleton's frames?

Mr. Poppleton—My frames are 12 inches square, inside measure; hives are 36 inches long, 13 deep, and 13¼ wide, all inside measure. This is the standard size I use, but have in use others of different lengths, both shorter and longer.

Mr. McNeill—Are they separated by a brood-chamber?

Mr. Poppleton—No. When I use a single super I can keep far better control over a colony then when working with the double brood-chamber. If they are rearing young queens I know it.

Mr. Coggshall—While that might do down South, it would not do everywhere.

Mr. Poppleton—I used it in Iowa 20 years.

Mr. Coggshall—With the double brood-chamber there is plenty of room for them to go down. I can tell by the looks of the extracting-combs if the colonies are queenless. The drone-comb will be more polisht than when the colony has a queen. If there are little cups, and these are polisht out, they are queenless.

Dr. Miller—There is a great deal in Mr. Coggshall's argument, but we must not forget that we are not all over the world. Mr. Poppleton stands almost alone; he is almost a crank; but if he were in Germany he would be doing like everybody else. It is all right for Mr. Poppleton, but it would be a bad plan for us.

Mr. Niver—Mr. Poppleton has 100 colonies, and he wants each one to do its best. Mr. Coggshall has 1,300, and he wants to get the most speed.

Mr. Danzenbaker—In Florida a double brood-chamber hive would be best on its side.

Mr. Stone—I believe locality makes no difference. I use 10-frame hives, and I notice that they don't have honey enough to fill the outside frames. If I should keep on extracting, I don't believe they would ever fill the hive. I don't keep bees to see how much I can get from them. I do it for fun.

Mr. Danzenbaker—Did I understand the member to say that he doesn't put the sections on until the brood-chambers are full?

Mr. Stone—No, I don't put them on.

Mr. Danzenbaker—That is where you make a mistake. If you put your sections on the very day the swarm goes in, the same hour if possible, you will get more honey. Fifteen years ago I bought some honey for 50 cents, and paid 40 cents for some other. I get 20 cents now.

A paper by Mr. P. H. Elwood, of New York, was read next, entitled,

Can and Ought Bee-Keepers to Control the Honey Market?

It would seem to be an easy matter for bee-keepers to control the price of honey when nearly all the honey produced is sold by commission men. Each producer can easily instruct his merchant as to the price he wishes his goods sold at, but unless there be co-operation in fixing the price he will not be much benefited by so doing. If he alone attempts to fix a price above the average, his goods will remain unsold. If, however, all producers unite on a fixt or uniform price, the result will be entirely different. It is this uniting that is the difficult part.

In nearly all kinds of business co-operation has been successful except among the agricultural classes. It is difficult to see why an intelligent class of men cannot figure out the cost of producing a pound of honey, and add a reasonable profit thereto for a selling price. We all know that a large crop can be produced more cheaply per pound than a small one, therefore the first step is to ascertain the amount produced and its location in the country. Then a committee of producers and middlemen can fix a price below which it is not desirable to sell.

Establishing the price of honey is now largely the work of a few individuals, and too little attention is paid to the size of the crop. I happen to know that the efforts of one man (Mr. Segelken) last fall very materially raised the price of fancy comb honey, which was scarce. It was not proposed that this scarcity should affect the opening prices of honey. By so doing the wholesaler would reap the principal profit of this scarcity, instead of the one legitimately entitled to it—the producer.

It may be said that it will be diffcult to establish a price for the many sizes and styles of packages offered. A minimum price would strike an average grade, and no objection would be raised to an advanced price for a particularly desirable or fashionable package, of which the supply may not be equal to the present demand. It is safe to say, however, that with a full supply of the various shapes and styles of the one-pound package of comb honey, there will not be much difference in price when attractively put up.

I do not see what objection can be raised to an arrangement of the kind proposed which is wholly advisory and not compulsory. Its fairness and merits would secure its general adoption. While carrying with it the idea of giving a living profit to the producer, it would also benefit the consumer by some supervision over the distribution of the crop, thus preventing a glut in some markets, as at present, while a scarcity exists in others.

We can learn something from the fruit-growers as to organization, but the task before us is simple, as our goods are not perishable. The present crop will market itself, but with a full crop thru the country co-operation between bee-keepers and middlemen will become imperatively necessary in order to maintain living prices.

P. H. Elwood.

Mr. Selser—I am sorry that the paper is so short, for I thought it would be one of the most interesting. The great trouble in marketing honey is shipping honey to the commission man. Mr. Wood was here yesterday. Mr. Segelken was also here. There is one gentleman here that sold him part of his crop at a fair price, and it never went to New York, but to Pittsburg. When there is any fine honey around Philadelphia I hear of it, and I try to keep myself in touch with the honey market so that I can quote prices. I went down to the market and saw honey that had been sold for 10 cents that was worth 15 cents. The fact was that the commission man knew no more about honey than a cat. I want to emphasize this to every bee-man, *not* to ship honey on commission. I think there is no other one thing that does so much to bring down prices. They would not pay *my* price. It hurts me, of course, and it hurts the producer more than it does me.

Mr. Root—I think Mr. Selser's mistake is that there are two classes of commission merchants. We do buy honey, but sometimes after we have bought honey it goes down in price, and we have it on our hands. If we had it on commission we would not have lost so much. It depends upon who the commission men are, and upon who the buyer is.

Mr. Poppleton—Mr. Root is right, but I sell to commission men when I can get more than in any other way. I sell both ways, in every way.

Mr. Selser—Does not the responsibility of the man make a difference? But some men worth half a million are not fit to sell honey.

Mr. Abbott—I am glad Mr. Selser has said what he has, for I think that the whole commission system is a humbug. He might as well ask you to loan him the goods as to ask you to send him the goods on commission. You cannot do for others as well as you can do for yourself. My wife and I never both leave home at the same time. She staid at home this time. A gentleman came into our place the other day and askt my wife what we paid for honey. She said "11½ cents." He said that the man across the street told him we paid only 9 cents. My wife is not given to ridicule as I am, but in this case she said the man across the street *lied*. The man came to me. He had left honey with this man, Mr. Willman, but he had plenty of honey on hand, and began to kick about the price. I didn't know the man, but I told him my price, and he told Mr. Willman the honey was sold, and I was glad to handle it, for there were men waiting to buy at 14 cents a pound. In this case the commission man lost money. It was a little batch, so he didn't lose much, perhaps $2.00. I haven't sold the honey yet, for I believe it is best to hold onto honey, for honey will be honey before bees fly again. But it is a mistake to send honey to this, that and the other man. I pay people for honey before I see it, and sell goods for cash. I always get the money, or they don't get the goods. I do business on a cash basis.

Mr. Selser—There is only one trouble with Mr. Abbott; he lives in the West, and we want him in Philadelphia. Cannot you come on here?

Mr. Abbott—I would spoil your business. [Laughter.]

Mr. Selser—There is no demand for honey now. If those persons who are pushing honey on the market would wait 30 days, honey would advance. There is not very much call for honey in September, but if you will wait until October or November you will get better prices.

Mr. York—We have honey commission men in Chicago—not as many as we used to have, however—and I agree with Mr. Abbott in one thing, and that is, that I get cash and pay cash. I don't always pay when I get the honey, for people know that I will pay for it just as soon as it is sold. But the price is agreed upon before the honey is shipt to me, so there is never any trouble. A commission man said the price of honey was 13 cents per pound. When askt if he had honey, he said "No." There was no honey on the market. What did he know about the price? One of the Chicago commission men is in Colorado buying all the honey he can get his hands on. I knew of one place where there were five carloads that they were holding for better prices.

Dr. Miller—Before you hang all the commission men I want to say one word for them. I believe I have a right to hire a man to sell honey for me if I don't want to sell it myself. That is all there is to the commission business. The honey is mine until it is sold; if the commission man does not pay me, I can jail him for it. There have been years when I couldn't sell one pound of honey, and those were the years when I considered the commission man my friend. If you sell it to a rascal who cheats you out of your price, it is no worse than to sell to a man who will not pay after he has the honey. I remember one year, when honey was very scarce, the commission men bought it up and had it on their hands. But who sets the price? The commission men. They put the price in the bee-papers. They set the price for us, and I think we ought to say to the commission men, "You are wronging us." I have said it in papers, and *you* ought to say it at every opportunity. Suppose you sent honey to a commission merchant who quotes 8 cents a pound. When he sends returns he sends 9 cents. You are pleased, but his quotation has helpt to lower the market. The commission men put honey down for one reason and another. Once in awhile one will put it away up. Quotations are not as they ought to be.

Mr. Selser—The price of honey is fixt by one thing—supply and demand.

Dr. Miller—Not always.

Mr. Selser—I quote Philadelphia and New York, for I think they are the biggest markets in the United States.

Dr. Miller—I have seen Mr. Selser's quotations, and I have thought, "Is that man a rascal?" His prices are nearly always above others.

Mr. Selser—You can watch my quotations. If honey is

16 cents I quote 15 cents. The one cent is allowed for commission, but I do not handle honey on commission.

Dr. Miller—That is the point upon which we need instruction. If honey is quoted 13 and 14 cents, I understand that that quotation means that we will get 13 and 14 cents, less the commission, freight, etc.

Pres. Whitcomb—Freight and cartage must come out, leaving about 10 cents. If what Mr. Selser says is true, then we have been fooling ourselves out of one cent a pound. The bee-men in the country don't know what they will get for their honey. There has been a good deal said about commission men. I have many friends among them, but they do not handle honey. If you go to a dollar-and-a-half hotel you don't expect to find a four-dollar hotel. If we want the best class of honey we go to the producer. The commission man never will do justice to honey, for he often handles a poor article.

Mr. Danzenbaker—I have been a farmer, and when I had anything to sell I had no trouble in getting a good price. I sent a sample of beeswax to a dealer, and he offered me 27½ cents per pound. I kept back ten pounds of the wax because I thought it was not good enough. He sent me 28 cents—one-half cent more than I expected. I know a commission man who bought comb honey, and as he didn't want to bother with it, it was allowed to get dusty, and a man came along and paid 8 cents for it. I sometimes let commission men sell honey for me. If I have honey that is a little "off" I don't want people to know it is mine, so I take it to a commission man and I set the price.

Mr. Hershiser—I think Mr. Danzenbaker is right. When I leave honey with a commission man I set the price. This year I left honey with a commission man, and he was offered 5 cents for it. I said I would not sell honey for 5 cents, so he gave the man my address and I sold it to him for 7 cents. The bee-keeper knows what the net price would be; it is only necessary for him to set the price.

Mr. York—One reason why I do not believe in the commission business is the great temptation to be dishonest when doing business that way. It is too great for many commission men to resist.

Mr. Niver—I was down on the Elk Street market in Buffalo, and I saw some very nice clover honey there. I askt the man in charge the price. He said "12 cents." I told him honey was scarce this year, and this was worth 15 cents. He said *no*, honey was not worth more than 12 cents. His name is Townsend, and he quotes prices in Gleanings in Bee-Culture.

Mr. Hershiser—I was down there on the market after Mr. Niver was there, and he was selling it for 12½ cents.

Mr. Root—There is one thing that the bee-papers can do—they can refuse to quote commission prices. We don't want to be hasty, but it will perhaps be best to limit quotations to a cash basis.

Mr. Niver—Mr. Townsend told me that it was none of my business.

Mr. Hershiser—Commission men are apt to speak a little short, especially to honey-men. I don't think we ought to be too hard on them if they show a disposition to be honest. In Pittsburg the markets are a little higher than anywhere else, because the honey-flora is scarce around there.

Dr. Mason—Is a man honest when he sells honey that Mr. Niver says is worth 15 cents for 12 cents?

Mr. Hershiser—I think so. I don't believe in assailing a man's honesty.

Mr. Niver—I don't wish to assail Mr. Townsend's honesty, for I know the man, but I thought he was a little short. He had no right to say it was none of my business.

Mr. York—Batterson & Co. were lately quoting beeswax at 30 cents a pound. I wrote them, offering them some fine wax at 28 cents; they then offered 26 cents delivered in Buffalo! Of course, I didn't ship any to them. This overquoting of the market ought to be stopt; also the taking of over 10 percent commission.

Mr. Poppleton—I don't like Mr. Selser's quotations. He should quote the selling price.

Mr. Danzenbaker—I could sell honey to one man for only 15 cents, but quotations fixt it at 16 cents. Whenever I have found a commission man that didn't know prices, I bought the honey he had, and kept up the price.

Dr. Mason—If I were selling honey thru commission men I'd like Mr. Selser's way. Then we know just what we will get.

Mr. Selser—In regard to these quotations, Mr. Poppleton has hinted at a very good point, and that is, that it costs a great deal more to send honey from Florida than from New York. Who fixes the price of honey? When I quote honey I don't go to commission men to find out prices. I am governed by supply and demand. When I went to college my professor taught me that a thing was worth only what it would bring. If I start out and fix a price for comb honey, and I see that there is a great deal of comb honey in the market, and it will not bring what I have quoted it at, I offer it for a lower price.

Mr. Hutchinson—It seems to me that the simplest way is for the commission men to quote the price of honey. We know what freight will cost. How does he know just what it will bring?

Mr. Danzenbaker—When I see his quotation I know what he will pay.

Mr. Selser—Mr. Danzenbaker is correct, and yet he is not. I don't go to the commission man to buy honey. I get it from the producers.

Dr. Miller—I am inclined to believe that Mr. Selser is incorrect about what other firms' quotations mean. Some would make this mistake: There is no commission to come out of his, while with others there would be commission. There ought to be some way that we could be *sure*. I ought to know before I write what the commission is. Here are two points equally distant from me, and I ought to know if there is a difference in commission. I believe there often is.

Mr. Wander—Why would it not be a good idea to have a committee, and let that committee be the editors of honey quotations in the bee-papers; and knowing all about it they can influence prices.

Pres. Whitcomb—The scheme is to quote large prices.

Mr. Root—I think we as editors might do a great deal. Awhile ago I wrote an article about this, and if you noticed the price advanced in a very short time. In regard to commission, there was one time when commission men charged 10 percent.

Mr. Abbott—Did you ever have this trouble, where commission men quote prices when they have no honey?

Mr. York—A commission man in Chicago said that no man can do business there on a 5-percent commission.

Mr. Hutchinson—Do you suppose the 5-percent men would allow their names to be used?

Mr. York—I think not. Ten percent is about right.

F. G. Herman—Mr. York, can't they make a limit in the price of honey on commisssion?

Mr. York—Yes.

Mr. Root—We ought to know if honey is scarce.

Mr. Hershiser—It is about one-third of a crop this year.

At this point Mr. York proposed the following amendment to the constitution of the Association, and after thoro discussion it was recommended for adoption:

Whenever a local bee-keepers' association shall decide to unite with this association as a body, it will be received upon payment by the local secretary of 50 cents per member per annum, providing that the local association's membership dues are at least $1.00.

Mr. Howe thought the local secretaries had enough to do without added work.

There was a rambling discussion as to the benefits of membership in this Association at this point that the reporter failed to get, but it was proven to the satisfaction of all present that membership in the Association is a practical benefit.

Dr. Miller—Membership *is* a practical benefit.

Mr. York—A year ago the Red Cross Society were doing relief work in Cuba. They wanted a dollar a piece from individuals to carry on their work. I paid my dollar. It didn't help *me*, but I was not sorry I paid the dollar, for it helpt others. If membership in this Association helps to prevent adulteration, won't it pay? This world is *awfully* selfish. The average person, I am sorry to say, seems to want to get 75 cents worth for an investment of 25 cents.

[Continued next week.]

York's Honey Almanac is a neat little 32-page pamphlet especially gotten up with a view to create a demand for honey among should-be consumers. Aside from the Almanac pages, the forepart of the pamphlet was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample for a stamp; 25 copies for 40 cents; 50 for 70 cents; 100 for $1.00; 250 for $2.25; 500 for $4.00. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

The Premiums offered on page 782 are well worth working for. Look at them.

THE AFTERTHOUGHT

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

THAT CITY-APIARY PICTURE.

And now we have a city apiary in which we can actually see some houses—which doesn't try to look like "a lodge in some vast wilderness" (lodge itself left out). Pleasant to see the skill with which Mr. Horstmann makes the best of his apiary. Capital idea is that of his to have something more esthetic than stones on his hives. Shade-boards must be weighted, and a big flower-pot has the requisite weight, sure enough. But in case very precious plants were so exposed, and in case a regular "jimmycane" should come along, might there not be a sad wreck, and lamentations from one side of the house? An army-pan full of dirt makes a good weight, and will not break—but I was disgusted to find I could not plant phloxes and things in them and have them thrive—too much oxide of iron soon permeates the soil. Page 673.

SULPHURING COMB HONEY FOR WAX-WORMS.

Mr. Doolittle is so eminent and excellent in almost all that pertains to apiculture that it is almost pleasant to be able to throw a stone at him once in awhile. His method of killing worms in section-honey, page 674—well, he makes it work, and others probably can if they're canny. But he surely could, if he tried, get up a less idiotic way of burning the sulphur. When a big lot of sulphur is dumpt on some coals several things happen. A large fraction of the sulphur melts, runs down among the ashes, and thenceforth does neither good nor harm. Another large portion, instead of burning, changes to pure vapor of sulphur, rises, encounters cool air, and changes back to the solid form again as extremely minute particles of sulphur mixt in the air like smoke. This is capable of doing harm, and not capable of doing much good, I take it. Another portion of the sulphur is *imperfectly* burned, and becomes vapor of sulphurous acid. This is what we want; and if we only knew some way to get this and nothing else we'd be happy. Not quite positive, but I do not think this alone would damage the looks of comb honey, even if it was somewhat in excess.

Lastly, another portion of the sulphur is *perfectly* burned, and becomes vapor of sulphuric acid. Wish I was better posted as to the effect of sulphuric-acid vapor. My impression is that it does both good and harm pretty freely—that is, quite destructive to animal life, and also quite damaging to the appearance of surfaces with which it comes in contact. Hot fire and abundant supply of air are understood to favor the formation of this latter kind of vapor. Who'll help us out of the wilderness? If any of you has a honey-room 10x10 feet, and eight feet high, Mr. D's. formula would call for *eight pounds* of sulphur—evidently enormously more than there is any sense in using. Say, try *one* pound of sulphur mixt with seven pounds of ashes, and burn it over a bellows draft.

DOES RHEUMATISM "ROOM" WITH HONEY-EATING PEOPLE?

"Rheumatism practically unknown among those who eat much honey," eh? I am not sure that I like such a flippant way of saying things which would be immensely important *if true*. I am heartily in favor of *finding out* about several such things; but proclaiming them in an unqualified way just now may impress the general public with the idea that we don't care very much what we say. Page 674.

THE SWEET-TOOTHT MICE.

I think Mr. Dadant in error, page 675, where he says mice are very fond of honey—only try to eat it when very near starvation, would be the way I should say it. They are fond of *bees*—and also gnaw combs because fond of gnawing things up on general principles. But then, besides the world's universal mouse, there are several American species more or less prevalent. Some of these latter may have a sweet tooth, for aught I know.

NOT "ROOTLESS" GUESSES ON APIARIAN STATISTICS.

Ernest Root gets to business well in his estimate of what we would be glad to know, the United States honey statistics. Good thing to have one anchor to hold on to, in room of drifting on an endless sea of guesses. The fact that something over 50,000,000 sections per year are used on the average is the anchor—and the pseudo-statistics of the States and the nation are the "false lights on the shore." Coming down to guesses, his guess that 500,000 people own bees (one or more colonies), and that 200,000 people take some practical interest in their bees—this is a fair and luminous guess, and will do to lean on a little till we have something better.

TEMPTINGLY BEAUTIFUL GIRLS.

Now see the winter of our (bachelors') discontent
Made worser by the plan of York.

Editorial note, page 680. He's just going to make the girls more beautiful and tempting than they are now by washing their faces with honoy. Stop him, somebody? [If Mr. Hasty will just be slow about letting the girls in his neghborhood see that item on page 680, he'll not need to call for anybody to stop us. But perhaps Mr. H. is waiting for the perfectly beautiful girl. If so, he might furnish the honey to some nice girl neighbor, and try it on.—EDITOR.]

GETTING CRISSCROSS NEIGHBORS TO KEEP BEES.

Get your cross-grained neighbor to keep a few bees himself, and he'll cease to rage and pitch so against your bees. Page 680. Guess that's so—but it strikes one at first like the mouse-plan of putting a bell on the cat—rather difficult of execution. Still, perhaps with sufficient craft and patience it might be done. Inoculate him now and again with small doses of the wonders of bee-lore. By-and-by when a late after-swarm of very small value alights on his tree, tell him you'll give them to him, and also hive them in a box or keg for him. If he takes this bait of yours, converse with him frequently about *his bees*. Got him sure, if he shows signs of wanting them fed up to winter over, instead of "taking them up" and realizing on their slender stock of honey. Even if he decides to take them up, you'll get him next year.

RAMBLER'S DIME SCALES.

Those scales of Rambler's, in which a common 10-cent spring balance is made to weigh the daily gains of a hive, is well worth remembering. (Balance the hive with pole and stones, and then attach the spring balance so as to take the *additional* weight of the day's gathering.) Page 683.

A GOOD BUSINESS NAME.

What a *friendly* face is that of William A. Selser, that opens in No. 44! And how suggestive the name is—"Sell, sir!" It's one-third of the business to produce honey, and *two*-thirds to sell it. This pleasant friend not only sells his own honey, but also that of a great many brethren who are a little lame on the mercantile two-thirds. Did you ever reflect what an amazing lot of people have names germane, somehow or other, to their business? Partly runs in the blood (names originally bestowed on account of business) and partly just the reverse (the suggestions of the name turning the bearer's thoughts in that direction) and partly, of course, by chance. This county has an undertaker named Coffin, and another and prominent one named Couldwell. The leading dynamite dealer (Toledo) is named Rummel. The Cincinnati mercantile firm of Ketchum & Cheatham is oft bespoken as an example; and a multitude of illustrations meet us at every turn.

BEE-KEEPERS' EXCHANGES.

As to commenting on the paper "Why Bee-Keepers' Exchanges Fail," perhaps I might as well wait until I can comment on "Why Bee-Keepers' Exchanges Succeed." However, it seems that in some places they do succeed to a certain extent—very like the boy succeeded in catching the woodchuck, because they *must*; no one man being able to get just his own honey alone disposed of at the distant market without having charges eat it all up. Page 691.

THOSE BRAGGING HONEY-YIELD TABULATIONS.

The tabulation of the honey-brag, by Mr. Adrian Getaz, is a very unusual and remarkable paper. Better mark it and keep it where it can be got at for reference. But how are we going to manage it, anywhow, to believe that Dr. Gallup got 750 pounds, and Mr. Snyder 700, and Mr. Maley 718, and Mr. Doolittle 566—and still harbor a private notion that those Australians fib about their larger figures, running up to 1,250? Page 693.

"LIGHTNING HARRY" IN CUBA—HOW(E)'S THAT?

And so our lightning Harry—Harry Howe—has got to Cuba and is running three apiaries there. And they have

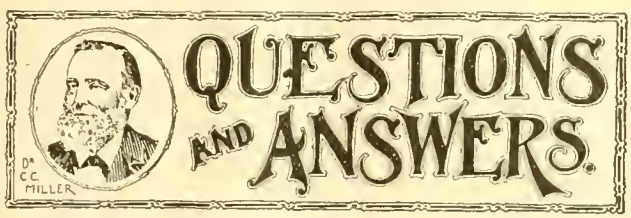
"location" there allee same as here. His three apiaries do not run alike, tho on a line only 11 miles long. Page 694.

HONEY FROM WILD ROSES.

And the "upper ten" in Constantinople are pampered, it seems, with a honey gathered in a region of wild roses, and very conspicuously flavored therewith. Would like to be a "Constant 10" long enough to get one taste of that honey. Page 699.

FLOWERS WAITING FOR INSECT VISITS.

How curious are Nature's ways—in that flowers, effectively covered from insect visits, remain in bloom several days the longer for it, *waitng for them*. Hard to be an anti-bee skeptic in the face of such evidence as that! Page 700.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

A Beginner's Questions.

1. How can I start with queen-bees? Will I have to have other bees to feed them? I saw queens advertised in my paper at $2.00 each. I am thinking of getting some.

2. Could I rear bees in the same neighborhood with other bee-keepers?

3. What is a nucleus? SUBSCRIBER.

ANSWERS.—1. A queen can start alone without any other bees, construct a nest and build up a colony, if she is a bumble-bee queen, but not if she is of the hive-bee sort. A queen of the latter kind is utterly worthless without a force of workers. So far as feeding is concerned, she might feed herself, altho that wouldn't do so well; but she wouldn't know a thing about building combs, she couldn't tend baby or clean house, and she would be chilled to death in a temperature that would be just comfortable with a family of workers around her. If you will watch the advertising pages of this journal, you will find queens advertised for less than $2.00 in the spring, unless you want something special for a breeder.

2. Yes, you can rear bees in the same neighborhood in which other bees are kept, unless others already have all the bees the territory will bear, in which case it would be bad for them and you to add any more, and you ought to find some locality where there is less danger of overstocking.

3. There's about the same difference between a nucleus and a full colony as there is between a little boy and a full-grown man. With only bees enough for one or two combs, it's a nucleus. By all means get a good text-book on bee-keeping.

Proper Spacing of Brood-Frames.

If you were going to use the Quinby frame spaced with nails the same as you do your Langstroth frames, and winter the bees on the summer stands, which would you use, 1⅜ or 1½ inch spacing? I mean, of course, from center to center. Do you consider the 1½-inch spacing any better than the 1⅜ for wintering out-of-doors? PENN.

ANSWER.—I would use the same distance from center to center, no matter what the means of spacing. But if you insist upon knowing whether 1⅜ or 1½ from center to center is best, I must confess I don't know. Nearly all hives made nowadays are made with measurements favoring the 1⅜ spacing. Yet some whose opinions are entitled to respect refuse to follow the crowd, and stick to the 1½ spacing. In favor of the 1½ it is said that that is the measurement bees use when left to themselves. Others say they use 1⅜. In the cases I have examined, the bees seemed to have been impartial, sometimes using a spacing nearer one measurement, and sometimes nearer the other. But my observation has been somewhat limited. Counting brood-comb ⅞-inch thick, the actual distance between two combs with 1½ inch spacing would be about 25 percent more than with 1⅜ spacing, and if the bees are packt just as densely in one case as in the other, a colony with bees enough to cover 7 combs with 1½ spacing could cover 9 with 1⅜ spacing. Very likely there is an advantage in that—at least at times. But it is just possible that in early spring it might be a disadvantage to have so few bees between two adjacent combs, for too few could not generate sufficient heat. On the whole, it is possible that one spacing may be about as good as the other.

Honey at the Cape of Good Hope.

Can you give me any statistics concerning the export or importation of honey at the Cape of Good Hope? If not, can you tell me where such information can be secured? ROB ROY.

ANSWER.—I'm sorry to say I can neither give the information nor say where it can be secured. Possibly this may meet the eye of some one who can tell.

A "Guess" Wanted.

The question I am about to ask is one to which, it seems to me, you can very reasonably reply by saying, "I don't know." Nevertheless, I am going to ask you for your "guess," because I believe your guess will be worth more than mine.

Along towards the last of July I began feeding a strong colony of bees with a view to making it swarm, as I wanted a few queen-cells. On Aug. 6 I examined and found no cells started, so I took out the frame on which was the old queen, and continued the feeding. The colony swarmed Aug. 21, and, of course, the swarm had a virgin queen. It occurred to me along in September to examine the hive of the swarm, but I could find no evidences of the presence of a queen. I made a few more examinations during September, with the same result, and concluded that I should have to buy a queen for the swarm. Before doing this, I made another examination and found a queen on one of the combs, but there were no signs of brood to be seen. The last examination, I think, was in the early days of October.

It seems to me that the queen should have been fertilized before the end of August, and that she should have been laying early in September. There was no lack of drones, and the honey-flow was quite good all thru the last-named month. I am puzzled to know whether I have a fertile queen in the hive or not; and, if not, why not? IOWA.

ANSWER.—I "guess" that the queen is no good and never will be any better. I don't know why. Barely possible it is a physical deformity that is not discernible to the naked eye. On the other hand, it is possible that the queen is all right, especially if no honey was coming in after the time she ought to have been laying, say Sept. 1. Some queens stop laying early—much earlier than others—and the same thing that would make a young queen stop laying Sept. 1 might keep a young queen from beginning to lay.

By way of keeping up your hope till next spring, here are three cases given in a French bee-journal, L'Apiculteur:

1. July 26, 1897, I took the queen from nucleus No. 1. Altho I kept watch from Aug. 25, I found no laying till Sept. 13, when I found one egg. This single egg was destroyed, and the laying ceast. Jan. 20 I took away the queen, and the comb on which I found her had worker-brood in all stages.

2. July 29, 1897, I took the queen from nucleus No. 3. Kept watch from Aug. 28, but never saw any laying. Feb. 26, 1898, I visited this nucleus, and the first frame I took out had worker-brood of all ages.

3. July 27, 1897, I took the queen from nucleus No. 4. I found no eggs till Sept. 13, when I found about 60. Sept. 22 eggs were still present, more than one in some cells, but they never hatcht, and were destroyed by the bees. Feb. 26, 1898, I took away the queen, and one comb had brood in all stages.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

Improved Spelling seems to suit Dr. Mason. In his department, "Good Things from Other Journals," in the Bee-Keepers' Review, he says he is pleased to see the steady but sure advance it is making, and glad to note that some of the bee-papers are not behind. The "t" for "ed" in the American Bee Journal lookt odd to him for a time, but now he thoroly enjoys it, and hints that he is expecting the Review to help on the needed reform.

Inky Drops from the Smoker, their cause and cure, have been for years troublesome problems for many bee-keepers, and it is not to be regretted that Dr. Miller's attempt to give a cure in this journal was not a brilliant success, for it has had the effect of bringing the attention of a number to the question, and now we have satisfactory light as to these dark spots. F. L. Thompson says a freshly cleaned smoker drops worse; Critic Taylor says dry fuel is the remedy.

Now comes R. B. Chipman, in the Bee-Keepers' Review, and says: "The moisture produced by damp fuel is a trivial matter compared with the amount of steam produced by combustion." While all will admit that the steam from combustion is considerable, they will hardly admit that it is of more consequence than the item of which Mr. Taylor speaks—the moisture that may be expelled by drying. Even supposing that the excess of moisure in damp fuel may not be as great as the steam of combustion, the fact remains that *it is excess*, and that it may be removed, while the steam of combustion is a constant quantity, alike present in damp or dry fuel. It is the excess that (like the last straw that breaks the camel's back), comes in to do most of the inky-drop business.

But Mr. Chipman agrees with what Dr. Miller said in this journal for Oct. 26, that the dropping is caused by the moisture condensing on the *cold* nozzle, and says, keep the smoker *hot;* while Editor Hutchinson agrees with Dr. Miller, that one part of the remedy is to keep a coating of soot on the nozzle so as to make it a non-conductor. Putting together all that has been said, if you don't want dirty drops on your nice, white sections, the way to prevent it is to have fuel that is thoroly dry, don't clean out the nozzle, but keep the lower part clean, especially the holes in the fire-pan, so as to keep up a brisk heat.

Barrels vs. Tin Cans for extracted honey seems to be one of the questions upon which there is undue positiveness on both sides. Editor Hutchinson had a long interview with the elder France at his home, and Mr. France felt indignant at the bitter objection to barrels. Having the barrels thoroly dried in advance, they have no trouble with leaking. Pointing to the door of the honey-house, Mr. France said:

"Don't you see that the floor is just the right hight, so that when a wagon is backt up there the floor and the bottom of the wagon are on a level? All you have to do is simply to *roll* the barrel into the wagon. Tin cans you can't roll nor shove; you have got to pick them up and *carry* them. When you get to the railroad station, all you have to do is to back the wagon up to the platform and roll out the barrel."

Most of the extracted honey in Wisconsin is put up in barrels. Some bakers and other large manufacturers prefer not to pay for more expensive packages. Mr. Hutchinson says:

"There is no doubt whatever that the men who buy honey from every class of producers, and then re-sell it to a varied class of customers, such men as Mr. George W. York, or the Roots of Medina, find the tin can a more desirable package. They have had a lot of experience, and ought to know what suits *them*, but they must not forget that 'there are others.'"

Moral:—Use the kind of package preferred by those to whom you ship, but don't use barrels unless you know that *you* can use them without leaking.

Shipping Comb Honey to Market.—A short time ago a large honey-dealer on South Water street (this city) askt us to call and see a small shipment of comb honey that had been sent in by a bee-keeper in this State.

Before shipping the honey the producer wrote the dealer that it was all white clover and basswood honey, supposedly of best grade of white comb honey, and the price agreed upon was 13 cents a pound at the railroad station of the shipper.

The honey came in, and to say that the honey-dealer was surprised, when he saw it, is to say it very calmly. It was all colors, all kinds of filling of sections, besides being "spotted, ring-streakt and speckled"—some of it sort of kaleidoscopic when held up to the light. Some of it could hardly pass as a good grade of amber honey.

The dealer wrote the producer, telling him that the honey was not as represented, that he would hold it subject to his order, or allow him 10 cents a pound for it—fully as much as we should think it worth—in fact, *we* wouldn't want to buy it at that price. Of course, the shipper thought that it was merely another case of the dealer trying to swindle him out of his honey, when the honey was not at all what it was expected to be.

We cannot understand why any bee-keeper should attempt to "work off" honey on a large dealer that knows many times as much about what various grades of honey

should be as does the producer, and also knows the market value of honey in his city.

We should say, never ship any but the finest grades of honey to a city market. Sell the inferior kinds at home, or give them away, but don't expect to get the price of the best for the poor grades. Or, first send a true sample of the honey you wish to sell.

When we examined the lot of honey referred to above, we really felt sorry for the dealer who had agreed to buy it. Some bee-keepers have much to learn yet about honey. What *they* think is the finest often turns out to be a very common or poor grade when compared with other shipments of honey. But the only way to learn some things is to get it by experience, even if it does seem to come high in that way.

Color of Honey.—Wm. Muth-Rasmussen complains in Gleanings in Bee-Culture that many bee-keepers do not classify their honey as to the color of the honey itself. A section of honey is judged merely by the outside appearance. In a room in which the light enters by only one window, hold the section up between the window and the eye, and thus looking *thru* the section you can classify it as to color. If the light enters at any other but the one place, the color of the honey can be seen only indistinctly. Mr. Muth-Rasmussen suggests having samples of various shades in small vials, these to be used as standards by which to classify honey. The editor thinks the candying would interfere with the usefulness of such samples, and hints that colored cards might be used instead, such cards not costing more than a cent apiece. It is earnestly to be hoped that Editor Root will not let the matter rest till such cards are produced. Even if they should not fully answer their purpose, it would be much to have *something* as a standard of color. At present, one man calls white what another calls amber, and perhaps the majority have no clearly defined idea as to different shades. By all means, Mr. Root, give us the color-cards.

To Our Foreign Subscribers. This paragraph is for those of our subscribers outside of the United States, Canada and Mexico. It ought not to be necessary to announce it, but it seems that we must again repeat that any offers we make anywhere, do not apply to bee-keepers located in any country outside of the three above named. This should be self-evident on account of the extra postage to foreign countries. Whenever we receive *any* money from foreign countries (except Canada and Mexico) we just apply it *all* on subscription, and will stop sending the Bee Journal to such when the time paid for expires.

We trust this notice will be read by those foreign subscribers who have sent us money on our offers of queens, books, etc., in connection with the Bee Journal. We simply mail the Bee Journal to such for the amount they send, and make no other response.

The Weekly Budget

Mr. Chas. C. Miller, son of Dr. C. C. Miller, has recently been promoted to be clerk of the Inspector General at Havana, Cuba. He was in the Government War office at Washington previous to the appointment to his new position in Cuba. We wish "Charlie" every success wherever he may be.

* * * * *

Mr. Wm. A. Pryal, of San Francisco Co., Calif., wrote us as follows, Nov. 22, about a great rain California has just been blest with:

"We have just past thru a great rainstorm. While we were not in need of it, it has been of untold benefit, as it assures us of a sufficient rainfall for the remainder of the season. There is not the least doubt but we shall have plenty of rain at intervals during the winter and spring to give us a great crop of grain, fruits, etc., next year. Of course the honey crop is not guaranteed altogether by the copiousness of the rainfall; the atmospheric condition of the weather at the time the flowers are in bloom has much to do with the flow of nectar. Then, if there should be foggy weather at such time, the amount of honey gathered will be materially affected thereby. But, as I have intimated, we are in a fair way to count on a big crop of honey thruout the State the coming year."

* * * * *

Mr. E. R. Harris, of Ontario, Canada, writing us Nov. 20, had this to say:

"In renewing my subscription to your estimable American Bee Journal, let me say that I have found great pleasure as well as profit in the perusal of its pages, and so long as I keep bees, and the Bee Journal maintains its present high standard of excellence, so long will I be a subscriber."

Thank you, Mr. Harris. We hope you will always keep bees.

* * * * *

Editor W. M. Barnum, of Barnum's Midland Farmer, has this paragraph in a recent issue of his paper:

"The probability of the early adoption of the new phonetic method of spelling by the University of Chicago will, we are sure, meet with the hearty approval of Editor York, of the American Bee Journal. It is a move in the right direction, and we shall take it up ourselves at some future time."

We would like to suggest to Mr. Barnum that if the spelling reform "is a move in the right direction," he'd better not wait until "some future time" to get a "*move* on him" like that. "*Now* is the accepted time," etc.

* * * * *

The Michigan State Convention.—We have received the following from Hon. Geo. E. Hilton, about the next meeting of the Michigan State Bee-Keepers' Association:

Friend York:—I have just returned from Thompsonville, Michigan, the place of holding the next State bee-keepers' convention, which occurs Jan. 1 and 2, 1900. This will give us the advantage of the holiday rates on all railroads, and I have secured a rate of 75 cents per day at all three of the hotels. We have the Maccabees hall free of charge. This bids fair to be the largest convention held in the State in many years. Either Mr. J. T. Calvert or Mr. Ernest R. Root will be there, and other noted bee-keepers.

Geo. E. Hilton, *Pres.*

We would like to urge every bee-keeper who can possibly attend this convention to be present. Michigan bee-keepers always have a good convention, whether the attendance be large or small. But the next meeting ought to be a big one.

* * * * *

Nicotine Poison.—Dr. Peiro, the experienced Chicago physician, writes us as follows:

"I am interested in Mr. A. I. Root's illustration regarding his friend's tobacco habit, as given on page 733. Mr. Herkner's experience is simply that of thousands of others who, thru ignorance or willfulness (generally the latter), persist in the use of one of our most virulent narcotic poisons.

"For twenty years, and more, I have urged upon patients the absolute necessity of permanently quitting the use of tobacco in any form, to maintain or recover their health. Most have an excuse, however, ready and potent to annihilate all arguments. The way some roll their eyes in abject consternation, and vow their utter inability to forego making smoke-stacks of themselves, with pipes or cigars, makes me blush for the sex I represent.

"Such utter despair at the very thought of really having to stop the use of the loud-smelling weed is indeed pitiful, as indicating the complete lack of manly determination. Young lads, barely entered apprentices in the noxious experiment, affect the most doleful sorrow at the suggested abstinence. They bewail the fate that requires so soul-torturing sacrifice! Indeed, life could be but an intolerable burden without tobacco. 'O no-o! I couldn't live without it; I'd die, doncherknow!'

"I wonder what the progeny of such weaklings will be? Or will Nature come to the rescue to prevent moral degeneracy? If not, the common clam will far eclipse them in intelligence."

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Supers for Winter.—"Australian Yankee" has for years, for wintering, tried, side by side with chaff hives and hives with cushions on, hives with supers left on, and the latter colonies come best thru the winter.—Australian Bee-Bulletin.

The Importance of Young Queens is urged by Editor Simmins. He says Mr. Cowan was among the first to insist upon their necessity, his practice being to keep them two whole seasons. But Mr. Simmins has never seen the queen that under high pressure would do as good work the second as the first season. They both agree that home-reared queens are best. As Mr. Simmins is a queen-breeder, that probably means queens reared in England as against imported queens.—Bee-Chat.

Worms and Pollen in Sections.—In my experience wax-moth will never touch comb unless pollen has been deposited in the cells at some time, and surely no bee-keeper would ever put on the market *a section* in which the queen has laid or pollen has been stored!—Australian Bee-Keeper. That may be all right in Australia, but on this side of the globe lots and lots of worms have been found in sections where no particle of pollen ever had been. Neither would a single cell of pollen disqualify a section for market if the section were all right in other respects.

Long Boiling of Foul-Broody Honey Not Necessary.—Harry S. Howe thinks there must have been some mistake made by scientists in demanding

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Bee-Keeping in Colorado.

It is generally conceded that Colorado is one of the leading honey-producing States, and the opinions of its bee-keepers should have weight alike with bee-editors and supply-dealers. Realizing this, Editor E. R. Root is now attending the annual Colorado Bee-Keepers' Convention, at Denver, to become better acquainted with the Western bee-keepers and their methods. The readers of Gleanings in Bee-Culture will get the benefit of this in forthcoming issues. He has with him, of course, his camera, so as to present to our subscribers views of the West as he saw them. The first installment of these writings may be expected in our Dec. 15th issue.

Other Leading Bee-Keepers.

Gleanings in Bee-Culture Oct. 15th contained a biographical sketch of the most extensive bee-keeper in the world, Capt. J. E. Hetherington. This is followed in Dec. 1st issue by biographical sketches, with portraits, of the Coggshalls, David and W. L. In this article will be a discussion of the 4-frame non-reversible extractor, with which Mr. W. L. Coggshall and his "lightning operators" have made such phenomenal records. Special features of Dec. 15th issue will be given in this column next week.

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so long boiling. He made experiments under the eye of Dr. Moore, of Cornell University, one of the World's best authorities upon the colon group, and found that between 10 and 15 minutes of actual boiling killed the spores as well as the vegetation stage of *Bacillus alvei*, and a temperature of 150° F. for several hours would kill them. Sunlight is almost surely fatal to all bacteria that do not normally live in it.—Bee-Keepers' Review.

How Does the Queen Get Water? seeing she never leaves the hive when mating or swarming, is askt in the Australian Bee-Bulletin. The answers are not of the most direct kind, but say, "Bees supply the queen's needs," or something to that effect, the one who most nearly meets the question squarely, saying, "The workers supply her with food and drink." If this Boiler might be allowed a guess at the answer, he would say that the queen is a total abstainer, never drinking even water, there being always enough water in the food given by the bees to avoid the necessity of taking water clear.

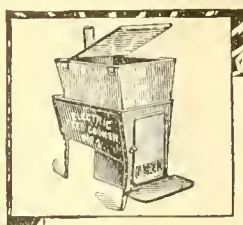
Heading Off Swarming.—O. J. Hetherington gives his plan in the Bee-Keepers' Review. When the swarming season arrives, he drives the bees from the hive, and hives them in a new hive on the old stand, putting on supers. The old hive is put on a new stand and given a queen-cell, or, preferably, a laying queen. Five such driven swarms last season gave him 60 pounds of honey each, while the old colonies gave 90, 60, and less. When the harvest is over, he puts a queen-excluder over the old hive, sets the driven swarm over it, leaves it two or three days, then smokes down most of the bees into the lower hive, and kills the upper queen. The plan saves watching for swarms, secures a good yield, and leaves the colonies with young queens.

Large vs. Small Colonies.—Critic Taylor comments in the Bee-Keepers' Review upon the article of Adrian Getaz, (American Bee Journal, page 562), and thinks Mr. Getaz in error in assuming that a colony in a 12-frame hive would average 50 percent stronger than one in an 8-frame hive. His experience teaches him that the smaller the hive, within reasonable bounds, the stronger the colony in proportion to the amount of room. He is especially surprised that Mr. Getaz should think there would be less swarming from the larger hives. He thinks it must inevitably be greater, as he counts a large population the principal factor in the production of swarms.

Editor Hutchinson thinks the article by Mr. Getaz is so "sensible and fair" that he copies it, reserving, however, the right to think that even if it be true that as much honey *per comb* can be secured with the larger hive, there are reasons why Northern bee-keepers might prefer the smaller hive, the system of management being such that a small, readily movable hive is desirable, such a hive being especially desirable for cellar-wintering.

Getting Bees Out of Sections.—The following from the National Stockman is good advice for those who have no Porter bee-escapes, or have not time to wait for it:

Take a piece of cotton cloth large enough to cover the super and hang down two or more inches on each of its four sides when finisht. On two opposite sides nail pieces of lath about as long as the super, and in the hem of the other two sides put buckshot to weigh it down. You have now what is called a 'robber-cloth,' which is very convenient to cover up frames of honey or brood when robbers are troublesome, for you can take it off or throw it on with one hand while holding a frame of honey in the other. To complete it as a bee-escape, make a pyramidal wigwam of wire-cloth with a hole at the top big enough so you can thrust your finger into it, cut a three-cornered hole in the center of your robber-cloth and sew your wigwam onto it. A



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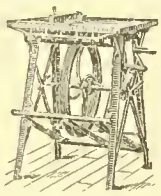

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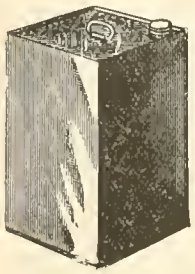

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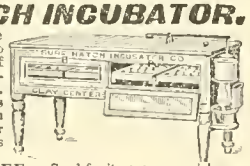

True to its name. It is made to hatch and does hatch. No excess heating in center of egg chamber. Entirely automatic. Hundreds in use. **Common Sense Brooders** are perfect. Let us make you prices laid down at your station. Our Catalogue is chock full of practical Poultry information. It is **FREE.** Send for it now.

SURE HATCH INCUBATOR COMPANY, Clay Center, Nebr.

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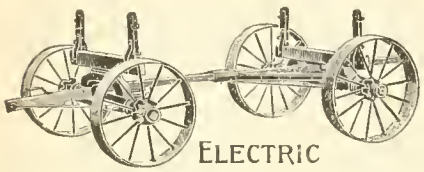
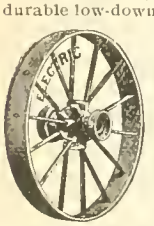
Farm Wagon Economy.

The economy of this proposition is not all found in the very reasonable price of the wagon itself, but in the great amount of labor it will save, and its great durability. The Electric



ELECTRIC

Wheel Co., who make this Electric Handy Wagon and the now famous Electric Wheels, have solved the problem of a successful and durable low-down wagon at a reasonable price.



This wagon is composed of the best material throuout—white hickory axles, steel wheels, steel hounds, etc.; guaranteed to carry 4,000 lbs. These Electric Steel Wheels are made to fit any wagon, and make practically a new wagon out of the old one. They can be had in any height desired, and any width of tire up to 8 inches. With an extra set of these wheels a farmer can interchange them with his regular wheels and have a high or low-down wagon at will. Write for catalog of the full "Electric Line" to Electric Wheel Co., Box 16, Quincy, Ill. Mention the Bee Journal.

good size is to have the sides of your tent, that is from the lower corner to the top, 10 to 12 inches. From one of the three lower corners to the next will be the same measure. Pile your supers of sections one on top of the other, then throw the escape over the top, and the bees will be all out in 3 or 4 hours. It is best not to make the piles more than 10 supers high, altho 15 high works pretty well. Five is still better than ten. Of course, the larger part of the bees are smoked down into the hive before the supers are taken off."

GENERAL ITEMS

A Good Oregon Report.

Last spring I started with 12 colonies in poor condition, and we had a cold, wet spring. I had 22 swarms, lost 3, and increast to 24. I doubled up some, and got 920 pounds of comb honey, half white. One colony produced 142 pounds, and another 103. They are black bees, and didn't swarm. My bees are mostly blacks, and some crosses. Bees are in good condition. Our main crop is from poison-oak.

M. W. PRUNER.
Douglas Co., Oreg., Nov. 21.

A Very Poor Season.

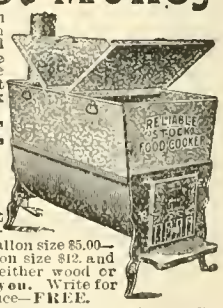
I have 60 colonies of Italian bees, and in spleudid condition for winter. My crop of honey was 1,000 pounds of comb honey. It was a very poor season, with a cold and wet spring. G. P UTENDORFER.
Sibley Co., Minn., Nov. 23.

Likes the Golden Method.

Bees have done nicely this year. The Golden method is all right. Last fall I put 12 colonies in winter quarters. I sold 2 colonies last spring, and from the 10 remaining I secured 600 sections of nice honey which I sold at 12½ cents each. I increast to 19 colonies, holding back swarming as much as I could by the Heddon method. The only colony which I managed according to the Golden method filled 112 sections; and the best colony by the other method produced 72 sections. I think if a person can spend all his time with the bees, and does not care for increase, the Golden

The Most Money

obtainable from a given amount of feed comes from **cooking it.** It makes all grain **entirely digestible**—none passes through the animal whole. **The best and cheapest** way to cook stock food is with a



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Furnace made of best cast gray iron with No. 22 galvanized steel boiler. 20 gallon size $5.00—burns wood only. 50 gallon size $12. and 100 gallon size $16, burn either wood or coal. **These will please you.** Write for descriptive circulars at once—**FREE.**

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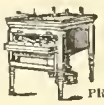

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PAGE

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the excellencies of **Page** Fence if you put it in use. The use of an article **decides** its **merits.**

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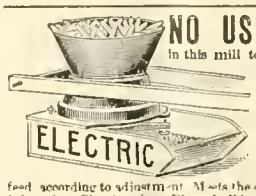

NO USELESS GEARS

in this mill to absorb and waste power. It is a simple, direct grinder, of large capacity and requires small power. The **ELECTRIC FEED MILL** cuts, crushes and grinds ear corn and all small grain, converting the whole into fine or coarse feed according to adjustment. Meets the demand for a good mill at a fair price. Circulars free. Electric Wheel Co. Box 16, Quincy, Ill.

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FROM LUNG OR KIDNEY

troubles can obtain valuable advice, FREE, by addressing DR. PEIRO, 34 Central Music Hall, CHICAGO.

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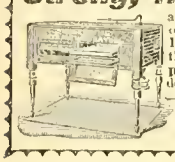
Strong, Healthy Chicks



are hatched by our incubators, and more of them than hens can hatch. Why? Because our regulator never fails to keep the heat just right. Catalogue printed in 5 languages gives full descriptions, illustrations and prices, and much information for poultry raisers. Sent for 6 cents.

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The Mississippi Valley Democrat

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Wood Binder

will hold one year's numbers of the AMERICAN BEE JOURNAL and will be sent by mail for **20 cents.** Full directions accompany each Binder. The issues of the JOURNAL can be inserted as soon as they are read, and preserved for reference in book form.

By paying for a year's subscription STRICTLY IN ADVANCE this Binder will be sent, postpaid, for 10 cents extra.

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has a hobby which is the sheep-breeder and his industry, first, foremost and all the time. Are you interested? Write to-day.

WOOL MARKETS AND SHEEP, CHICAGO, ILL.

method for producing comb honey is all right.

I have built a shed to hold 50 colonies, and moved all my bees into it. I have discovered that it is too wet in this part of Washington to keep the bees outside on the ground. A. F. FLUCKIGER.

Lewis Co., Wash., Oct. 27.

Poor Year for Bees.

My bees did well the past season. I had 9 colonies in the spring and have 16 now. From five I took 35 gallons of white clover extracted honey, and when the season ended I reared queens and divided colonies, as I did not have a swarm during the season. It was a poor year for bees. Honey is scarce and no one has any to sell but myself. I am wintering half of my colonies on the summer stands and the rest in the cellar. C. J. YODER.

Wayne Co., Ohio, Nov. 7.

Shorter Crop than for Years.

The honey crop in this county is shorter than for many years. My 102 colonies stored a little over 4 tons of surplus, which I sold for 6 cents a pound, all in a lump. I look for a good honey crop next year. We have had 3 inches of rain in the last two months. Wild flowers are in bloom, and bees are gathering some honey.

Tulare Co., Calif., Nov. 17. DAN CLUBB.

Favorable Conditions in Utah.

While we have had an off year in Utah this year, some bee-keepers' bees have fairly boomed, while others have done little or nothing. Personally, I cannot complain.

We are having beautiful fall weather, and while some of the bees are weak the conditions as a whole appear to be favorable. E. S. LOVESY.

Salt Lake Co., Utah, Nov. 24.

Report from Southwestern Iowa.

I commenced the past season with 25 colonies, 24 being good ones, and one very weak. I increast to 39 colonies, partly by division and partly by natural swarming, and got an average of 50 pounds of comb honey per colony, spring count, which I have sold at home for 12½ cents a pound. I have never shipt any honey off to market; I peddle it in the towns, and get the cash for it; as honey is scarce there is no trouble to sell it.

I have my bees packt for winter, with plenty of stores. I always winter them outdoors packt in leaves and fine straw, and they winter safely. It is nice and warm here, and raining today. The clovers are nice and green, and plenty of them, too. We look for a crop next year.

Page Co., Iowa, Nov. 22. JERRY SCOTT.

Cleaning Up Unfinisht Sections.

On page 716 I noticed an item about getting bees to clean up unfinisht sections by putting them in a single super. The writer wants to know if any one has been successful by so doing. I had some unfinisht sections and put them in a super and then placed them on a hive, and the bees cleaned out part of the honey. Then I put them on another hive and they were soon finisht, not leaving a single cell that was not cleaned out nicely, and it was not over a week in being done.

I have 10 colonies but got surplus honey from only four the past season. As the spring was late and dry I got but little white honey. The most of the honey was gathered in the fall. On account of much rainy weather during the season bees had a poor chance to gather honey, but all except two colonies seemed to have honey. I had so much to do that I could not give them necessary care.

I will winter my bees as I did last winter as it was very successful, even as cold as it was then. I will put the same boxes on. I

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.

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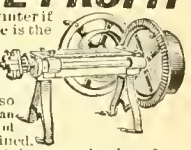

can be secured from hens in winter if properly fed. **Green Cut Bone** is the best egg producing food winter or summer. Nothing equals the **DANDY GREEN BONE CUTTERS** for preparing bone. Cut pieces so that chicks or mature fowls can **eat it easily and without danger of choking.** Hand and power combined, or both. Turn easy—cut fast. Catalogue and prices free

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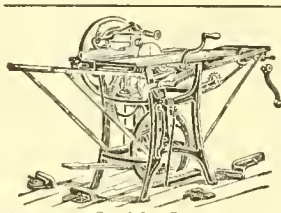

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read in an article that bees should not see sunlight in the winter; then my plan of last winter, of setting a wide board in front to keep snow from stopping the entrance, will answer two purposes—keep out the snow and also the sunshine.

I had only four swarms last season, and two of them left. That seemed to be the style around here, if the bee-keeper did not see them as soon as they came out; so I had an increase of only two colonies. I had made a number of hives last winter expecting to fill them with bees, so I will not need to make any this winter.

SARAH J. GRIFFITH.

Cumberland Co., N. J., Nov. 13.

A Short Experience with Bees.

I have been keeping bees about 3 years, beginning with blacks. Last spring I got a golden Italian queen and also two 5-banded queens, and they are all doing well. I now have 25 colonies in 8-frame hives. The weight of one frame of honey was 10 pounds, which would make 80 pounds to the colony, and this has been a bad season here for honey, altho this is the best country in the world for bees.

The way I manage swarming is to take the old hive away and put the new one in its place. I take one frame, with the queen, out of the old hive and put it into the new, letting the bees in the old hive rear a new queen. I think I can, from one good laying queen, rear a hundred during the season.

E. E. WILSON.

Swain Co., N. C., Oct. 12.

The Dead Bee.

Dead amid the dewy clover
Lies a bonny little rover,
Who could shape her course afar,
Without compass, without star.

Nevermore across the azure
Shall she sail in search of treasure:
Nevermore, when day is gone,
Home shall bie her galleon ,

From the jonquil's golden chalice,
And the lily's ivory palace,
And the violets' divine
Cups of white and purple wine.

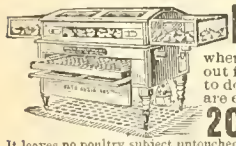
Smile, smile on, thou faithless summer,
To forget thine early comer.
Say, if thou hadst first departed.
Had she still been merry hearted ?

On the boughs in rapture swinging
Gleefully the birds are singing.
I, who mourn thee, little bee,
Will pronounce thine elegy:

Be it meetness or unmeetness,
Thou didst garner up life's sweetness.
Wiser than the sages wist;
Earth has one less optimist.

—Alice Lena Cole, in Century.

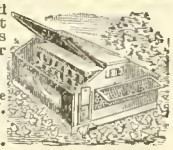
[Mr. Peter Westrum, of Hamilton Co., Iowa, kindly sent us the above poem.—EDITOR.]



HATCHING CHICKENS—EASY JOB

when you know just how to proceed. When the course is mapped out for you by others of experience. When you are told just what to do and how to do do it and what not to do. All these things are completely covered by the master hand of experience in our

20th CENTURY POULTRY BOOK.



It leaves no poultry subject untouched. It's practical and of easy adoption. Among the rest it tells about the latest improvements in the world famous RELIABLE INCUBATORS AND BROODERS. Used all over the U. S. and in 51 foreign countries. We mail the book to any inquirer on receipt of 10c to cover postage, &c.

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(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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Convention Notices.

New York.—The annual meeting of the Ontario County, N. Y., Bee-Keepers' Association will be held in Canandaigua, Dec. 14 and 15, 1899. All interested in bees or honey are invited to attend. RUTH E. TAYLOR, Sec.

Bellona, N. Y.

Illinois.—The executive committee of the Illinois State Bee-Keepers' Association have changed the date of the ninth annual meeting to Dec. 26 and 27, 1899. It is understood that all the railroads will make half rates during the holidays. The State Horticultural Society and the State Teachers' Institute hold their annual meetings at the same time, and all at the State House, so that it will be a great inducement for a good attendance. We expect to have a fine program for the occasion, and a good time, as bee-keepers always do when they get together. Come, everybody! JAS. A. STONE, Sec.

Bradfordton, Ill.

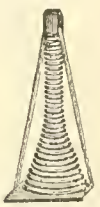
Vermont.—The Vermont Bee-Keepers' Association and the Vermont Horticultural Society will meet in Burlington, Dec. 12 and 13.

Tuesday evening, Dec. 12, the program includes, "Bees, flowers and fruits," (with stereopticon), by Prof. L. R. Jones, Vermont Experiment Station; and "How to begin bee-keeping," by R. H. Holmes.

On Wednesday, Dec. 13, among the various numbers on the program are these: General discussion—"What have we learned the past season about bee-keeping?" "Most economical way to change queens, and best method of introducing them?" by W. G. Larrabee. "Are bees as capable of improvement as horses, cattle, or other animals or birds under domestication?" by J. E. Crane. "Is it desirable for honey-producers to adopt the Doolittle method of queen-rearing?" by R. H. Holmes. "Best method of building up colonies in the spring," by O. J. Lowrey. "Report on work done at Experiment Station apiary the past season," by Cassius R. Peck. "Best method of disposing of the honey crop in years of plenty," by Geo. W. Fassett. "Can the swarming impulse be bred out?" by H. L. Leonard.

There will be exhibits of fruit and of bee-products. These will be displayed in the assembly room, Experiment Station building, where the meetings are held. Everyone is strongly urged to bring something for these exhibits. The Central Vermont and the Rutland railroads have signified their willingness to grant the usual convention rates of one and one-third fare for round trip. Consult your station agent before buying your ticket. Burlington has several excellent hotels. Hotel headquarters will be at the Van Ness House, where the usual reduced rates will be granted. Everybody is cordially invited to attend. Ladies are especially welcome. It is believed that any one who will come will find the meetings interesting. M. F. CRAM, Sec.

West Brookfield, Vt.



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The MONETTE Queen-Clipping Device is a fine thing for use in catching and clipping Queens' wings. We mail it for 25 cents; or will send it FREE as a premium for sending us ONE NEW subscriber to the Bee Journal for a year at $1.00; or for $1.10 we will mail the Bee Journal one year and the Clipping Device. Address,

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For Sale 350 Colonies of BEES in the best location in COLORADO.

They produced last year over 40,000 lbs. of Honey

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PATENT WIRED COMB FOUNDATION

Has no Sag in Brood-Frames.

Thin Flat-Bottom Foundation

Has no Fishbone in the Surplus Honey.

Being the cleanest is usually workt the quickest of any foundation made.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 24.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13@14c; amber, 10@12c; and dark to buckwheat, 9@10c. Extracted white clover and basswood, 8@9c; amber, 7@8c; dark, 6@7c. Beeswax, 27c.
R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth

KANSAS CITY, Nov. 9. We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:
Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CLEVELAND, Dec. 1.—Fancy white, 16@17c; No. 1 white, 15@16c; No. 1 amber, 13@14c; No. 2 amber, 12@13c; buckwheat, 9@10c. White extracted, 8@9c. A. B. WILLIAMS & Co.

SAN FRANCISCO, Nov. 22.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Nov. 7.—We quote as follows: Fancy white, 10c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.
We are pleased to note that our market continues in splendid condition. While the supply is light, yet, owing to the high prices, it seems to be quite equal to the demand. Later on when the trade realizes the shortage more thoroly the demand undoubtedly will be much better.
BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Nov. 18.—The November trade has up to the present not been as good as was expected, and shows a falling off from October. It seems that the somewhat higher prices this fall are affecting the consumptive demand to some extent, still the warm weather yet prevailing in this part of the country may also be partly responsible for it. While trade has been light, prices have been well maintained, nobody being burdened with stock to such an amount as to become oppressive.
Fancy white still going at 14@14½c, and light amber 1 cent less. Extracted, white, 8@8½c.
PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

WANTED.—Comb and extracted honey; state price, kind, and quantity.
R. A. BURNETT & CO.,
33A20t 163 So. Water St., Chicago, Ill.

WANTED.—Extracted honey all kinds; mail sample and price expected delivered at Cincinnati. I pay spot cash on delivery.
C. H. W. WEBER,
Successor to Chas. Muth & Son and A. Muth.
40Atf 2146-48 Central Ave., Cincinnati, O.

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PATENT WEED PROCESS SHEETING.

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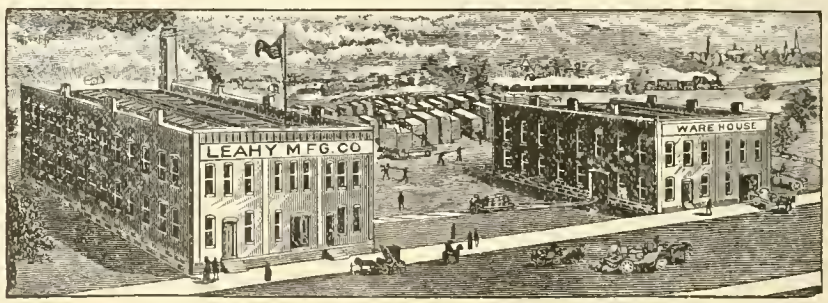

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1-pound square, $4.70 per gross, with corks; 5 gross, $4.50 per gross. Labels, 60c per gross; $1.00 for 500. We have several styles of Jars for retailing honey.

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39th YEAR. CHICAGO, ILL., DECEMBER 14, 1899 No. 50.

CONTRIBUTED ARTICLES

Wild or Bee Aster and Some of Its Peculiarities.

BY JOHN R. SCHMIDT.

SEVERAL years ago, while studying the honey-producing plants of this section of Ohio, my attention was called to a plant which of late is rapidly forging its way to the front, and now promises to be quite a friend of the bee-keeper in this locality, especially with those who have colonies light in stores at the close of the main flow, which is derived from that well-known and much-abused sweet clover.

This plant, as will be seen from the photograph, is the wild or bee-aster, as it is sometimes called, and probably better known to some bee-keepers. At first it could only be seen in small patches scattered along the roadsides and waste lands, but now it can be found almost everywhere, more or less, and seems to be well establisht and spreading rapidly.

Wild aster begins to bloom late in August—about the same time as the goldenrod, but, unlike it, it continues to bloom until late in October, sometimes lasting until the middle of November, when it is usually killed by heavy frosts. At this writing (Nov. 15) there are still a few blossoms to be seen in the more sheltered localities.

Sweet clover and wild aster live and thrive on the same ground, and vigorous growths of each can often be seen intermixt, the wild aster starting to bloom when the last blossoms of the sweet clover fail, making a field of continuous bloom from June until the end of October.

Wild or Bee Aster.

Probably I would better explain more definitely as to the two plants growing on the same ground. I do not know how long they would prosper if sown together, or would I advise anyone to do such a thing, but this is just exactly what it amounts to here on the waste lands, both trying to crowd each other out, and each holding its own. The sweet clover being a biennial, gives the other an advantage in growth every other year, and probably this accounts for its rapid increase and steady encroachment upon the clover-fields. Nothing but time will tell which one will survive.

Wild aster has several peculiarities which are worth mentioning, and one is very apt to deceive, making one think there are two varieties when in fact there is really only one. When the plant first begins to bloom the flowers are white, but after blooming for some time—I cannot tell how long, but probably depending upon the condition of the weather—the flowers change to a purple, which makes one think that there are two different varieties blooming together. This I thought was the case, but on closer investigation, when selecting specimens for my illustration, I found some plants with the two different colored flowers on the same stem, and when observing the same plants some time afterwards I found all the white flowers had disappeared, and the plants now had a profuse bloom of the purple flowers. This change became more rapid as the season advanced, and in a few weeks not a white flower could be seen.

As to the quality of the honey from wild aster, it is hard to say anything definite at present, but it seems to be of a rich, dark amber, and of very good flavor. When the honey is being ripened a very strong, peculiar odor is emitted from the hives, which can unquestionably be recognized at a great distance from them, on a calm, sultry day, usually within 300 feet of the hives. This odor makes its appearance at the very beginning of the bloom, almost before the presence of the flower is discovered, and lasts until it ceases to bloom. The flower itself is almost odorless, and entirely unlike that which is emitted from the hives. The bees work vigorously upon the blossoms, and even after being confined by cool weather they take to this plant as soon as the weather permits them to do so again.

Section honey will never be obtained here from this source, as the flow comes too late, and the weather is always against it. The growth of wild aster seems to depend very much upon the soil, as in some localities the plant is just the opposite from what it is in others. Often it can be seen covering large stretches of land, with plants which are short and stubby, of a very uniform hight, and rarely exceeding one foot; while in others this same plant often exceeds 5 feet in hight, and has numerous small branches on the top of a tall, slender stem, very much like the golden-rod.

Hamilton Co., Ohio.

See Premiums offered on pages 795, 796, 797 and 798.

The Coal-Tar Products—Naptha Beta, Etc.

BY PROF. A. J. COOK.

I HAVE received the following letter from the editor of the American Bee Journal, with request for a reply :

EDITOR YORK:—I am very much interested in all you can publish in regard to naptha beta and naphthaline. Do you think if naphthaline were put into hives of healthy colonies in early spring, and kept there during the robbing season, that the germs of foul brood that would be brought from other infected hives would be kept from spreading in the healthy colonies until the bee-keeper would discover it, and have an opportunity to cure it while strong in bees?

If this drug will retard the disease so that it can be discovered and treated while a colony is strong, I can see how it can be of much service to those who produce honey in foul-brood localities.

Salt Lake Co., Utah. GEO. E. DUDLEY.

The work of the German chemists in the last few years in developing or obtaining the great number of coal-tar products has been of great importance, and is far from the least of the invaluable services for which we are indebted to the savants of that great country.

Mr. Dudley wishes to know more of naptha beta and naphthaline. These are carbonaceous substances, or hydrocarbons. The chemical formula is C_{10} H OH. This one is also known as naphtholium isonaphthol, and naphthol. The crystals are white, and are insoluble in water, but soluble in alcohol. They are derived from crude petroleum, and are most important in the arts.

The Tyrian purple used to be so expensive that only the richest could possess fabrics thus colored or dyed. Today the poorest can rejoice in the richest purple. The aniline dyes are so rich that their beauty is only matcht by their cheapness. The variety of these colors is beyond belief. They are not only used to color various fabrics, as woolen, cotton and silk goods, but they are of extensive use in microscopic work. Various microbes are distinguisht by their readiness to stain with these coal-tar products. Indeed, three of the most important stains used in studying bacteria are fuchsin, gentian violet and methylene blue. Another one, eosin, is used in histology as much as any stain, and is of inestimable value in developing cell-structure.

The coal-tar or petroleum products are also much used in the manufacture of perfumes. They are also used as antiseptics and disinfectants. Lest some may not fully understand the exact significance of these terms, I will define them.

A disinfectant kills or destroys the germs. It has been proven that disinfectants must come in contact with the bacteria to be effective.

An antiseptic prevents the development and growth of the germs. It may not destroy them. A disinfectant is of necessity an antiseptic. The reverse is, of course, not necessarily true.

A germicide is a substance that kills the germs—it is both a disinfectant and an antiseptic.

The naphthaline hydrocarbons are powerful disinfectants, and so are germicides, and of course antiseptics. Heat is one of the best germicides, and so of course a powerful disinfectant. Next to heat the substances in question rank high. They are among the carbolic-acid compounds, and are very much used.

As stated above, the disinfectant must come in immediate contact with the bacteria to be destroyed. It would seem, then, that the mere presence of naphthaline in the hive might not be enough. All these products are more or less volatile, and in case enough of the material volatilized to reach and kill all the germs, then the work would be done by placing the substance in the hives. But naphthaline is very obnoxious to insects. We use it to keep the dermestes and other cabinet pests from our collections of insects. I should fear that in case we placed enough in the hive so that the emanations were fatal to the foul-brood germs, we should drive the bees away, or, perchance, kill them. It would be more sure to give the bees the material in their food. This is the recommendation, as I understand it. It is found that enough may be fed to destroy the bacteria, and yet not injure the bees.

The old method to destroy this disease has been so thoroly tried that we may rely on its virtue. In case foul brood is about us, and we fear the infection, then to feed beta naphthol in quantities harmless to the bees and yet sufficient to kill the bacilli, would doubtless be wise. If, as is claimed, 33 grains to 1,000 grains of liquid, or one in 3,000 is strong enough, surely it could not injure the bees. It is to be hoped that the spores are as susceptible as are the bacilli themselves. Thus, bee-keepers may well be interested in this beta naphthol. Stained by a related product the bacillus of foul brood shows its presence, while the naphtholium itself is a germicide that bids fair to rid our apiaries of this worst malady that afflicts them.

THE DZIERZON THEORY.

The present outcry against the Dzierzon Theory makes me think of the once clamor regarding impregnation of the queen in confinement. So many had done it. They spoke positively, and no ifs were tolerated; but the most of us couldn't effect it. We did not believe they had. The outcry soon subsided. What bee-keeper of long experience had not had ample proof regarding this parthenogenesis in the production of male bees? Virgin layers, superannuated queens, laying workers, all speak authoritatively on the question. Drone-larvæ never developt into workers in my apiary, nor the reverse. Have they really in any apiary?

Los Angeles Co., Calif.

Queen-Excluders—Their Merits and Demerits.

BY H. H. HYDE.

I SEE that Mr. Doolittle advises the use of queen-excluders, on page 626; but I cannot agree with him. Their only merit is in queen-rearing, and here I find great use for them. Also, they are a good thing where the bee-keeper has only one flow of honey, but for the majority who have two or more flows queen-excluders are not only a nuisance, but reduce the crop of honey from one-third to one-half. My reasons are as follows :

1st. They retard brood-rearing. To gather honey it requires bees—the more in one hive the better the results. For instance, a queen-excluder is placed in the hive and the queen confined to one brood-chamber at the beginning of the honey-flow, as it was not needed before, as that hive did not need it because it did not have enough brood the season before.

But, to return the queen having only one story for brood, either comes out with (what I call) a small swarm, or remains to be crowded out. The colonies become weak and in no shape to get any flows of honey later; and right here let me say that many bee-keepers don't suppose they have a later crop of honey just because their bees are in no shape to gather it.

Now for the other side: Imagine a colony has been strong all the year, and is strong when it goes into winter quarters with plenty of honey and young bees. Such a colony comes thru in fine shape, and by March 1 brood-rearing commences in earnest, and by April I the bottom story is full of bees and brood; the bees and queen are allowed to occupy the next story for brood, it having been left on with honey in it all winter. Now, isn't it plain that these bees, reared now, are the ones to catch the honey-flow from May 1 to June 15? When this flow comes they go to piling in honey with a rush; the queen is allowed to go where she pleases, and honey is extracted wherever it is found. You may say this will result in a poor article of honey, but I say it will not, as it is not necessary to extract from combs containing young larvæ. (An expert can extract without injuring young larvæ.)

You may say this course will result in a lot of useless consumers. Not so. We wish brood-rearing pusht until Aug. 15, at least, to get the flow from July 15 until frost. With queen-excluders our colonies will be so weakened that they would not store any surplus during this last flow.

Williamson Co., Tex.

A Visit to a Cuban Apiary.

BY HARRY HOWE.

I AM just back from a visit which Walter Somerford, Fred Somerford, and myself, paid to a Cuban apiary. This is located two or three miles from the coast, and about 15 miles from Havana. About the time we turned off from the good stone road it began to rain. The red clay soil here makes the worst mud I ever tried to ride a wheel thru. It was not long before we left our wheels by the roadside and went on foot.

The apiary—when we got to it—was under the shade of a fine old grove of trees. Everything was as clean and neat around it as possible. The whole space occupied by the bees was kept clear of leaves and weeds. The whole aspect of the place showed that the owner was a man who tried to have things right.

The hives were about five feet long and one foot square,

open at both ends. They were laid very nearly level upon scantlings 18 inches from the ground. The posts which supported these frames were set in cement. This bed of cement was turned up in a ridge on the out edge, making a sort of basin a foot across, in the middle of which the post arose from an island of cement. The basin was filled with water. The frames for the support of the hives were all painted with tar.

The rows were perfectly straight and regular, and were exactly the same distance apart thru the apiary. One could sight over the corners of the hives in any direction and find them all in line. Take it all together, it was one of the handsomest apiaries I ever saw.

The owner, Senor Manuel Querido, said that he fixt them up so as to keep out the ants. He had lost a good many colonies lately, and thought the ants were to blame. Upon further enquiry it turned out that he had lost 125 colonies the past summer. Many of those left did not seem to be in good shape. They had an air of not caring what became of them. These and various other symptoms led us to ask the owner if he knew about foul brood, but he said he had never heard of it.

Of course we did not dig into the bees to see for ourselves, but later on, when we get a foul-brood inspector, he will.

There were about 200 colonies still in working order.

Senor Querido showed us his extractor, which was a sort of reversible affair, and took the honey out of the combs both sides at once. As the honey is taken from the hives it is placed in open baskets. These are set over a big trough made from a hollow tree and fixt so the honey will run into a big cask. Then the combs in the baskets are all masht fine with a big masher, and the honey allowed to drain out.

To get the honey out of the hive he uses a long iron rod with a sort of chisel on one end and a sharp-edged hook on the other.

The wax product in Cuba is large. One firm has a regular trade of 10,000 pounds a month.

One of the problems here for the foul-brood inspector will be how to treat the colonies in box-hives.

Province of Habana, Cuba, Nov. 10.

Straw Mats—How Made and Used.

BY C. P. DADANT.

ON page 743, I see that the question is askt as to how we can have ventilation in our hives if we pile them on top of one another in the cellar, with a straw mat between them. The question would naturally arise in the mind of any one who does not know how our hives are made, and Dr. Miller's explanation is not quite sufficient to remove the doubt.

The hives that we use are made with an extension downward on three sides of the bottom-board, that is, on all sides but the front, so that, when the bottom is removed, the hive extends about 1½ inches below the bottom of the frames. This extension is intended to shed all moisture on the back and sides, and to make a better joint of the body with the bottom.

As a matter of course, when our hives are piled in the cellar, on top of one another, this projection below gives a sufficient distance between the bottom of the frames and the straw mat of the next hive below to insure a very plentiful ventilation. But the straw mat itself is very porous, and a good ventilating implement, and I wish to say a few things in its favor. I do not know of any one outside of our own disciples, except the late Chas. F. Muth, who used the straw mat in this country. Yet it is the most unanimous verdict of all who have tried it that it is a very useful, a very inexpensive, and a very durable implement.

America is renowned for her enterprise, for the readiness with which she takes hold of any implement or any improvement which is brought to her by her many immigrants from all parts of the world, and it is held justly, I believe, that it is this readiness of adaptability, together with the many and various customs and ideas brought over from all parts of the world, which make America's progress so markt. Yet there are a few things in which America's progress has been slow. It took a quarter of a century to show our Western farmer, or business man, that his dyspeptic feeling was caused by the incessant repetition of fried bacon and hot biscuits three times per day. A good, palatable stew was despised, and pork, beef, mutton, chicken, rabbit, duck, etc., were fried, fried, fried—much to the damage of the American stomach, and of the quality of some of the dishes. "You can't work your French dishes on me, Mr. Dadant," said a young Hoosier housekeeper to me; "I can't go your liver and kidneys, and cow-bag and tripe, and those little minnies with castor-oil on 'em" (French sardines). "No, sir-ree!"

Well, the world is moving, and we can now eat "canard aux navets" and "gigot a l'ail" in American homes, even here in the West, and the best of it is that the people think it is good.

Beg pardon, Mr. Editor, I did not mean to run off in this way. Let me see, it was straw mats I was talking about.

Well, I believe it ought to be with the straw mats as with the cooking, our Americans ought to try them, and I'll warrant they will think them good.

I call them *straw* mats, but we make them of sloughgrass (put it "slu," Mr. Editor), because it is stronger and easier handled than straw; but I believe mats made of good rye-straw would be better.

The mat over the oilcloth in the summer keeps the heat off better than a two-inch plank. In the winter, if placed right over the bees, it absorbs moisture, allows it to pass thru without letting the heat escape. If it gets wet thru a leak in the hive-top it readily dries up, does not rot like the material of a chaff or sawdust cushion, and the bees do not eat any holes into it as they do in the material of which chaff cushion is made. Yet, I am free to acknowledge that the latter is a little better than the straw mat, fits better over the frames, and keeps the heat and the cold off in fully as good a fashion. But we have discarded the chaff and sawdust cushions for the very reason that, unless they were made of very heavy material, the bees would soon pick them full of holes and change them into a nuisance.

The only drawback I can see to the straw mat is the difficulty of fitting it over the frames when the hive is made, like many hives of the present day, with the super or cover fitting exactly over the body. Our hives are all made with a telescope cap, which gives us much more surface at the top, and the irregularities of a straw mat are not in the way.

Some of our old European bee-keepers use straw-mats, not only in the hive, but around it, as a winter shelter. An old French bee-keeper living but a few miles from us, who had been a market-gardener in the vicinity of Paris in his younger days, had made a number of straw mats two feet in width, and some 5 feet long, with which he wrapt each of his hives at the opening of winter, leaving but a narrow opening in front for air and sunshine. During the summer he kept the mats piled up in a shed with wood ashes sprinkled between them. He said that this kept out the mice, as the fine ash-dust was unpleasant to them.

In Europe they protect not only bees, but hothouse roofs, chicken-coops and trees in espaliers, early vegetables and hotbed plants, with straw mats of all sorts and sizes.

Hancock Co., Ill.

Success in Wintering Bees on Deep Frames.

BY EDWIN BEVINS.

MR. HASTY, in "The Afterthought," on page 647, seems to think that some of my success in wintering bees on frames deeper than the Langstroth may be due, or partly due, to the increast size of the brood-chambers instead of being altogether due to the increast depth of the frames. When I take into consideration the fact that I have used for several years quite a number of these hives with the deep frames, and that these hives have been of varying capacities—some taking 8, some 9, and some 10 frames—I think I can form a tolerably good judgment with regard to the cause for the better wintering of the bees. I use some hives 12 inches deep, taking 8 frames the same as the Langtroth-Simplicity and dovetailed, and have never lost a colony that was wintered in one of them, on account of a deficiency of stores.

If any one has kept bees long in hives of this size, he cannot have failed to observe that there is always, at the approach of winter, a good deal more honey above the space in the combs devoted to brood-rearing than there is in combs of the Langstroth depth. While the space used for brood is about equal in both kinds of frames, the honey between the upper edges of the brood-cells and the top-bars of the frames will be about two inches wider in the deep frames than it will be found in the Langstroth frames.

It seems to me that this increast amount of honey cuts

more of a figure in the matter of successful wintering than does the little additional room in the brood-chamber.

The Langstroth hive is 9½ inches deep. The hives which I use, and which I am comparing with the Langstroth, are 12 inches deep, both taking 8 frames. The deeper hive has about 540 cubic inches of space more than the shallower one, and this space is largely taken up by the additional amount of honey which the hive contains above that which is contained in the smaller hives. Just how much credit is due the remaining additional space for the successful wintering of the bees I leave each one to judge for himself. I give the credit to the honey, and not to the space.

If added size of brood-chamber, aside from its use as storage-room for added stores, contributes anything to the successful wintering of bees, it seems that many who use deeper hives than the Langstroth have not found it out. Their practice is to contract the brood-chamber to correspond with the size of the brood-nest.

Decatur Co., Iowa, Oct. 31.

Why the Widely Differing Views of Apiarian Writers?

BY DR. C. C. MILLER.

PARTLY for lack of time, and partly because I wanted to make further investigation, I have not sooner replied to some things said some time ago by my good friend, G. M. Doolittle. A rather common question for beginners to ask is: "Why is it that such widely differing views are given in the bee-papers by different writers?" I think there are at least three reasons for difference of views: Difference in locality, difference in bees, and errors of opinion. I don't know just how much each of these figures in the differences between Mr. Doolittle and myself, but I am sure we are both after the truth.

RECEIVING CRITICISM KINDLY.

And that reminds me of a question Mr. Doolittle asks me on page 484:

"Does not the Master enjoin on his followers that they have grace given them from on high to receive kindly any criticism, or anything else, no matter whether given in the spirit of kindness or not.....?"

I don't know whether I can give the exactly correct answer to that question. My idea of receiving kindly is that when I receive anything kindly from any one I am thankful to him for it. If a man tries to kill me, I don't think I ought to try to kill him in return (unless it might be to save my own life), but I wouldn't feel under any special obligation to offer him a resolution of thanks for his murderous attempt. Neither do I think I am expected to have exactly the same feeling toward one who shows up my faults with the sole object of humiliating me, as toward one who with a spirit of kindness wants to show me the truth. At any rate, I hope there will never be anything but a spirit of kindness between us, Mr. Doolittle.

HIVING A SWARM WITH A NUCLEUS.

On page 371 Mr. Doolittle speaks of hiving a swarm with a nucleus, and says:

"There is only one way which I know of without having many bees killed and making a general 'muss' of it all around;" and that way is to have all the queens with clipt wings, and when a swarm issues to set the old hive in place of the nucleus, setting the nucleus on the old stand, after first smoking its bees so as to get them to fill themselves with honey; then when the swarm begins to return, to shake the bees and queen of the nucleus on the ground a foot to 18 inches from the hive, and all will unite peaceably. "If you do not take these precautions," says he, "the bees in the nucleus would kill the bees from the swarm as fast as they came back, in nine cases out of ten."

I read that with some degree of surprise, having many times united a swarm with a nucleus in a simpler manner, as follows: When a swarm issues take the old hive from the stand, disposing of its queen in any way thought best; set the nucleus on the stand whence came the swarm, and let the bees do the rest. In other words, I did not take the precaution to shake the bees off the nucleus on the ground. Before moving the nucleus I always gave it a little smoke to keep the bees from stinging me. I had never noticed the bees fighting, but as I had not given the matter very close attention, and this was only June 15, I thought I would watch carefully, in case I had the opportunity, during the rest of the season. I had the opportunity in four different cases in the month of July, but could see no fighting whatever. I do not understand why it is that in nine cases out of ten the entire swarm should be killed for Mr. Doolittle, and none at all for me. Hon. R. L. Taylor's experience agrees with mine.

METHODS OF MAKING NUCLEI.

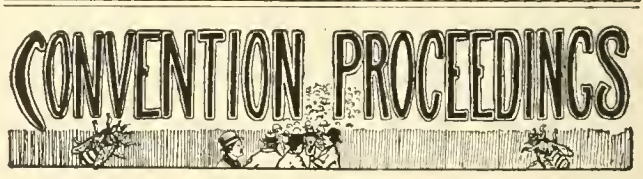
On the same page (371) Mr. Doolittle says four quarts of bees will not make a good nucleus, that is, the bees will not stay unless precautions are taken, but that one quart will make a good nucleus if the bees are imprisoned 48 hours and fed, or if brought from an out-apiary and imprisoned 24 hours. If I should take four quarts of bees without any precaution, and put them on a frame of brood and one of honey, I think enough would remain to make a fair nucleus, but as I have not actually tried for years taking bees from a hive with a laying queen to form a nucleus, I am not positive about it. It may be that the kind of brood has something to do in the case. But I am very positive I would not take the trouble to imprison bees to form nuclei. If I take two frames of brood with adhering bees from a queenless colony and put them in an empty hive, plenty of bees will remain to make a good nucleus. I have formed nuclei by the hundred in this manner. If I have no queenless colony, it is easier to make one queenless than to imprison the bees. I think it is W. W. Somerford who says his bees will desert the nucleus, and he thinks the difference is in the kind of bees.

LOSING A QUEEN BY HIVING A SWARM WITH A NUCLEUS.

On page 484, Mr. Doolittle wants me to tell where I got from his article the idea that if "Iowa" hived a swarm with a nucleus, he would "lose a queen by the operation." Mr. Doolittle, I didn't get it from your article, and you would never have thought so if you had had time to give the matter proper attention. But you wrote it in July, when, no doubt, the bees were making heavy demands on your time. I had no reference to your plan. I was trying to show that he did not mean to hive a swarm in a nucleus, and said *if* he did so he would lose a queen, and we have no right to suppose he had your plan in mind, else why should you give him the plan afterward?

I think that very often such misunderstandings occur from the fact that one person has one thing strongly in mind, the other another, each supposing the other is looking from the same standpoint. You had your plan strongly in mind, and I was thinking only from "Iowa's" standpoint.

McHenry Co., Ill., Nov. 28.



Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 773.]

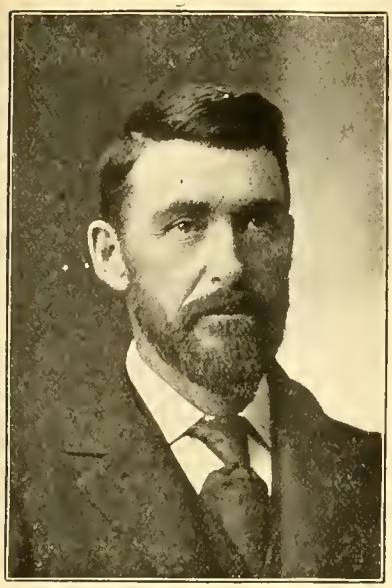
Sec. Mason then read the following paper by Mr. N. E. France, of Wisconsin, on

Foul Brood Its Detection and Eradication.

Most bee-keepers who care enough about the welfare of their bees to attend bee-keepers' conventions, and carefully study their books and publications on modern bee-culture, almost without exception know how to detect and eradicate this dreaded and contagious disease.

Often I find practical bee-keepers who are so busy with their many duties, and not having paid attention to the valuable articles written on foul brood in their papers on bee-culture, think their bees are all right, but because they did not do as well as in former years attribute it to bad luck or poor seasons. Upon my examination of such apiaries I find, to their surprise, foul brood in several hives.

Again, so often I am askt if foul brood is near their apiary, and if I answer no they release all care or fear, and do not inform themselves so as to be able to detect it should



N. E. France.

it ever appear. I have cured cases of foul brood in Wisconsin that were imported to our State from some of the most distant States in the Union.

While speaking on this subject I wish to call attention to the great need of national laws, or at least that each State have a law on this subject that will provide for its eradication. As Wisconsin State inspector of apiaries I feel as if I were, so to speak, one of the great United States colony of bee-keepers, and by the united efforts of my sister States, this disease could be stampt out. As it now is I often get discouraged when I find new cases that were just imported from other States. For the health and prosperity of mankind we have laws in each State to quarantine and properly care for all contagious diseases; even laws to provide for experienced veterinary surgeons to examine any diseased farm stock, and prescribe what to do. If this is just and right, why not have laws that will protect our bees, the sales from which form the support of a multitude of people?

Many times have I found hives with diseased combs in them containing honey, the bees dead from foul brood, and bees from other apiaries taking home the disease. Now Wisconsin bee-keepers have legal protection, and compel such parties either to cure the disease or burn it. From the good that several State laws have done for bee-keepers is it not time we all join hands and secure such laws as will protect our life support?

Any one who has carefully read the many articles from Cowan's British Bee Journal, or even the many American writers, such as Dr. Howard's pamphlet, McEvoy's annual reports, and Mr. R. L. Taylor's experiments, will certainly know how to detect and eradicate foul brood.

N. E. FRANCE.

Dr. Mason—I have had a good deal of experience with foul brood. Twenty years ago the present month we moved from the southern part of Ohio to Toledo, and the following spring added to our apiary by buying eight or ten colonies of bees. and with them got foul brood in two or three colonies, as I afterwards learned to my sorrow. During the summer of 1880, I noticed when passing some of the hives, a peculiar odor, which I afterwards learned was foul brood. In the next three years the number of colonies had increast to about 80, with only three or four badly affected, and not until the winter of 1893-94 did I learn how to cure the disease. At the beginning of the next season I extracted the honey from all the combs that had no brood in them. I shook the bees from all the good colonies into clean hives and gave them starters. The combs with brood in them were given to weak colonies, adding one, two, or three stories, as seemed best. These storied colonies were made queenless and left 21 days for all the brood to hatch, then treated as the others had been, to clean hives with starters. Each of these colonies had reared a queen which commenced laying a few days after they were placed in the clean hives. I then extracted the honey from the brood-combs in the storied hives. As soon as I had extracted the honey from the first combs containing no brood, they were thrown, frames and all, into a caldron kettle of boiling water, and the frames were removed as soon as the comb was melted. The same treatment was given the frames and combs from the storied hives. All the hives were afterward boiled in the same kettle. The first honey extracted was boiled and fed back to the bees. The honey extracted from the combs in the storied hives was so thick with the foul brood matter as to make it ropy, so that when being poured from one receptacle to another it was difficult to keep it from all going together. This was also boiled, strained, treated to a solution of salicylic acid, and fed to the bees, and there has not been a sign of foul brood in our apiary since. I don't believe the frames were in the boiling water (and wax) to exceed two or three minutes—just long enough for the combs to melt—and the hives were not boiled to exceed five minutes. In boiling the honey I took pains to have it *all* boil by dipping up the boiling honey and pouring it on the sides of the boiler, and so washing down into the boiling honey any that might be on the sides above that which was boiling; and this constant dipping kept the honey from boiling over. We see much in the bee-papers about boiling foul-broody honey for two or three hours, or even longer, and Dr. Miller, here, is one of those who advises long boiling. I believe the trouble comes from not being careful and particular enough in the boiling—perhaps paying no attention to that which may be on the sides of the boiler, above what is boiling. I believe that to *boil* foul-broody honey, *regardless of the time the boiling is continued*, will cure the disease. Some of my colonies were a rotten mass of foul brood, but my first attempt at curing it was a complete success. In boiling the hives and frames I took great pains when handling anything that was or might be foul-broody, not to touch anything with my hands, or anything else used in handling foul-broody things, until they had been disinfected with salicylic-acid solution. It seems to me that where there has been a failure when boiling has been resorted to, there must have been a lack of care somewhere. A careless person has no business to attempt to cure foul brood, for he will surely fail. With me a solution of salicylic acid and borax is as sure a cure for foul brood as is boiling. Mr. France, in his paper, advises burning as a cure, and within a few lines says, "I don't believe in burning honey." I am in full accord with his last statement. I don't believe it is *necessary* to burn anything in connection with curing the disease, and still I have no doubt but with some who keep bees, and have diseased honey and brood, the *safest* way is to make a bonfire of all contaminated things—bees, combs, honey and hives—and the best time to make the bonfire is at night, when the bees are at home.

Mr. Root—I would like to ask Dr. Mason how many colonies he treated at one time.

Dr. Mason—I think I was three days (having a boy to help) in treating about 80 colonies.

Mr. Root—How much honey did you boil?

Dr. Mason—I think about 50 gallons. The bees were in bad shape, some of the colonies having very little honey, and none of them very much.

Mr. Root—That might do for a small bee-keeper, but with a large apiary we recommend to burn the cases and burn the combs. Dr. Mason would likely be careful. There are two stages—the spore form and the bacilli. I don't know which form your bees had. If they had the spore form you could probably cure it by boiling.

Dr. Mason—I don't know the difference between spore and bacilli. Of course, we expect people will be thoro in this. I tried some experiments. Some one recommended spraying the combs with a salicylic-acid solution, but it proved a failure. When I was thru extracting that foul-broody honey I closed the extractor, and it was not opened again until last month, when being in need of an extra extractor I took that one to pieces as much as possible and gave it a thoro washing with salicylic-acid solution, and I have no fears of foul brood from using that extractor.

Dr. Miller—Dr. Mason has quoted me as saying that we should boil a long time. I am a mere parrot. Some say a long time; others, a short time; but to be safe I believe in doing it thoroly. I am on the fence.

Mr. Root—I am clear off the fence.

Mr. Cook—Dr. Mason spoke of something being ropy. Does that affect the honey?

Dr. Mason—No.

Mr. Howe—I have been at work in this matter of dealing with foul-broody honey for months. I have boiled it long and short, but I have never had the spores grow after 15 minutes boiling. After 7 minutes boiling it may grow again. When I finally closed up my work in the laboratory I had a whole lot of all sorts of things, and put everything in the steam bath. Everything was dead; 15 minutes will kill the germs if boiled. or at boiling heat.

Pres. Whitcomb—I have not done much else this summer but hustle with foul brood. When I was absent it got started. We haven't lost a single case. It must be treated when other bees are not flying. We extracted the honey and put the frames in boilers and boiled them, then put them out to cool. In boiling honey I don't think any one will ever leave the cover on the boiler very long, for it will

boil over, and the more you stir it the more it will boil. The boiling point depends upon the altitude. We are 2,000 feet above the sea now, and the boiling point is not as high as in lower altitudes.

Mr. Howe—I took about 200 samples, but the lowest temperature was 225 degrees, the highest 235. Our altitude is about 900 feet.

Mr. Root—What was the temperature?

Mr. Howe—I think 228 degrees was the average. It is a good deal of fun to experiment.

Pres. Whitcomb—I tried boiling on the kitchen range. That is how I lost my hair. [Laughter.] Temperature has a good deal to do with it, but if it is thoroly done I don't think you will have any more trouble. When we left home our hives were full of honey.

Mr. Abbott—I would like to ask Mr. Whitcomb if he doesn't think there is danger of the foul brood appearing yet? Has a long enough time past to show?

Pres. Whitcomb—We have examined them very carefully, and there are no indications of any disease. I understand that foul brood grows very rapidly—will appear in a few hours after infection. But I find that in examining them closely young bees are hatching, and no signs of foul brood.

Mr. Abbott—The reason I askt the question was, I had never had much to do with foul brood, and I am glad of it. I knew a man whose bees were troubled with it, and he came to me for advice. I told him that the best thing he could do was to build a fire around the infected hives. But that lookt wasteful to him, and he came down several times and thought he had everything all right, but it would crop out again. It reminded me of a story of a Philadelphia doctor that my father used to tell about. He wanted to see a noted doctor, and said to a man, "Can you tell me where Dr. Jones lives?" "Ye-es-s-s-sir, he l-l-l-li-lives ri-right up there." "Is that the noted doctor who cures stuttering?" "Ye-ye-yes s-sir, he c-c-cu-cu-cured me!" [Laughter.] *Burning cures foul brood.*

Mr. Root—My experience is that a few bees will go back. I was speaking about it to Mr. Howe. He is too bashful to speak about it. Some will not be careful enough in treating the disease. The 15 minutes boiling is not too long. If the boiling is carried on carefully for 15 minutes perhaps that will be enough.

Pres. Whitcomb—Do you think the spores exist in wax?

Mr. Root—I don't know. We have since been sending out a circular recommending the McEvoy treatment. It requires very careful handling. Kerosene treatment is good, but the bees object to it.

Mr. Hutchinson—Did you ever try to put the bees on full sheets of foundation, Mr. Whitcomb?

Pres. Whitcomb—No.

Mr. Hershiser—How many batches did you treat at a time?

Pres. Whitcomb—Sometimes as many as 35. Some of the neighbors' bees had it, and we put them into our hives and brought them home and treated them there.

Dr. Mason—I found that I could treat foul brood and let the bees go into the fields at the same time. I have fed foul-broody honey that had been treated with salicylic acid and cured the disease. Mr. Howe says 15 minutes boiling is enough. He is a practical man. He does not sit down and let things run themselves.

Mr. Hershiser—I thought my bees had foul brood the past summer. It didn't prove to be foul brood, but I think that with care in treating it, it can be eradicated.

[Continued next week.]

Report of the Northern Illinois Bee-Keepers' Convention.

The annual meeting of the Northern Illinois Bee-Keepers' Association was held in Rockford, Oct. 17 and 18, 1899. The convention was called to order with about 25 members present, and the report showed 950 colonies of bees in the spring, with 1,150 colonies at the present time, and about 22,578 pounds of honey produced, most of which has been sold at 15 cents per pound for comb honey.

The program for the day opened by a song from the daughters of the president, Mr. S. H. Herrick, also one from Mr. N. E. France, of Wisconsin.

After the address by Pres. Herrick questions were in order, among those askt and answered being the following:

CAUSE OF WINTER LOSS OF BEES.

QUES.—What, in your opinion, was the cause of the mortality among bees last winter? ANS.—Poor grade of honey and the extreme cold.

Mr. Highbarger, who was successful in wintering, said: "Give plenty of ventilation, use loose-bottomed hives with cleats on the underside, which are reverst in winter to give more space at the entrance."

Mr. France extracts all dark honey, and feeds only white.

PLAIN SECTIONS AND FENCE SEPARATORS.

Some liked the plain sections and fence separators, while others were of the opinion that they were fads gotten up by dealers.

BEE-SMOKERS—GETTING RID OF ANTS.

QUES.—Which is the best smoker?

Mr. Highbarger said the Bingham. Mr. France thinks the Crane the best, but as it is pretty expensive he recommends the Corneil. He also cautioned against the use of tobacco in the smoker, as it has been known to taint the honey.

QUES.—What is the best method of getting rid of ants in the apiary? ANS.—Kerosene or camphor rubbed around the edge of the hives, or bi-sulphide of carbon put in their nests.

BEE-STING REMEDY—OWNERSHIP OF ABSCONDING SWARMS—TAXING BEES.

QUES.—What is the best remedy for bee-stings? ANS.—Whiskey, in severe cases.

QUES.—If a swarm leaves your premises and alights in an adjoining lot, can you remove your bees? ANS.—Agreed that you could.

QUES.—Are bees taxt in Illinois? ANS.—Not generally, but most thought it a question which the assessor in each town decided for himself.

EXHIBIT OF APIARIAN PHOTOGRAPHS.

Mr. France showed several hundred photographs of prominent bee-keepers of Wisconsin, among them several ladies. Miss Candler and Mrs. Pickard were both successful in the business, and Mrs. Pickard had about 50,000 pounds of extracted honey last year. He also showed a sample of foul-brood comb. Mr. France has treated 4,000 colonies for this disease in the three years he has been State inspector of apiaries.

A resolution was unanimously adopted recommending to bee-keepers Geo. R. McCartney's combined foundation fastener and section press.

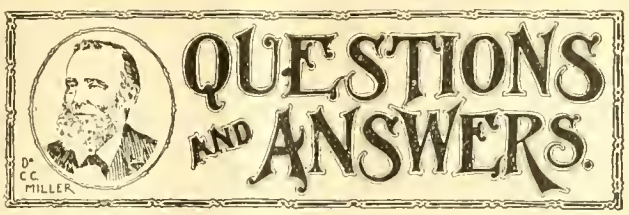
The following officers were elected, and the meeting adjourned till next year:

President, S. H. Herrick; vice-president, J. Stewart; secretary, B. Kennedy; and treasurer, O. J. Cummings.

B. KENNEDY, *Sec.*

PETE—"No, ma'am, I don't like bees. Nearly got killed by one once."
MISS ABBEY—"What! a honey-bee?"
PETE—"No. Lynching bee."—Collier's Weekly.

The Premiums offered on page 796 are well worth working for. Look at them.



CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

[The Questions may be mailed to the Bee Journal office, or to Dr. Miller direct, when he will answer them here. Please do not ask the Doctor to send answers by mail.—EDITOR.]

Trouble with Wood Splints in Foundation.

I tried a few frames with wood splints to prevent sagging of foundation. In some of the frames, especially some shallow extracting-frames, the foundation bulged out between the splints. It did this before being put on the hive. It did not seem to sag, but to swell out as a piece of wood would do when wet. I had the foundation cold when putting it in the frames in order to handle it more easily, and warm weather may have caused it to expand. Can you tell me how to prevent this trouble? I like the plan with this exeeption. NORTH CAROLINA.

ANSWER.—Your question beats me. I hardly think that foundation expands sufficiently to be noticed when it is heated. It may, of course, stretch, but in that ease it doesn't shrink back again when it gets cold. You say the expanding was greater in the shallow frames, and one would have expected the opposite. Possibly some one else can help out.

Red Cedar for Hive-Making.

Would you advise using Washington red cedar as a material for hive-making? Without considering the cost, do you think it would in any way prevent moths? Of course, I know there is no excuse for a practical bee-keeper having moths in his apiary. I am a young bee-keeper, 17 years of age, and this is my second year. I have 34 colonies. Last winter was very severe, but I did not lose a colony. I got about 300 pounds of comb honey this season, which was poor for the number of colonies. WASH.

ANSWER.—If I am not mistaken, Washington red cedar is the same lumber as that of which shingles are made and brought to this part of the country, and I know of no reason why it would not be all right for bee-hives. I know nothing as to its efficacy in keeping out moths, but I should have no faith in it. There is a popular notion that furs and woolens put in cedar chests are safe from clothes moths, but bee-moths are not the same, and it is doubtful whether cedar wood is any better than other wood for keeping out any kind of moths. Any chest will keep out moths if it is moth-tight and the stuffs are put in free from moths.

Questions on Wintering Bees.

1. A friend of mine says he heard you say at a bee-convention that you used a two-inch rim made of ⅞-inch lumber under each hive for dead bees and rubbish to fall into during the winter months. Do you still consider it a good thing for either the cellar or out-door wintering?

2. I use the Dadant hive, and my bees are in extra-fine condition at present. The tops of the brood-frames are covered with old earpet nicely fitted on and glued tight with propolis. I expect to winter them on the summer stands. I live in a sheltered place, but will set a row of corn-fodder on the north side. Do you advise any change? If so, in what way? Would it be better to leave the hive-entrance open, or partly closed? The entranees to the hives are 8x⅜ inches. ILLINOIS.

ANSWERS.—1. Most decidedly. I think it a good thing in the eellar to have a two-inch space under the bottom-bars. Perhaps it would not be so good out-doors. If the bees wouldn't build down into it, I'd be glad to leave the two-inch space summer as well as winter. But they will build into that space, so I have practiced reversing the bottom-boards for summer. The latest plan, however, is to leave the bottom-board the year round with the deep side uppermost, and in summer put in a sort of false bottom to fill up the space. After trying some of these for two years, I feel quite favorably inclined toward them.

2. Perhaps you will do well to make no change in your plans, especially if those same plans have been successful in previous winters. I *think* I would leave the entire 8x⅜s entrance open.

House-Apiaries.

1. Are house-apiaries any better than out-door apiaries?

2. Would it do to have bees in an upper story of a building when the lower part is used for something else?

3. How do you arrange for the entrances? MO.

ANSWERS.—1. There are a few bee-keepers who value house-apiaries highly and are successful with them. Others prefer hives in the open air.

2. Bees may be kept successfully in the upper story of a building while the lower story is occupied. That is, they may be successfully kept thru the summer, but in most cases the wintering would not be so successful.

3. A canal of any kind may be made that will allow the bees to pass freely from the hive to the outer air, but will not allow any bees to get from the hive inside the building.

Starting in Bee-Keeping.

As I intend to start in the bee-business some time between now and next spring, I would like to ask a few questions, as I have had no experience with bees as yet. I wish to produce comb honey exclusively.

1. What kind of bees should I get?
2. Where are the best places to get them?
3. How many colonies should I get to start with?
4. Would I better get them now, or wait till spring?
5. What kind of hives would I better get?

I have lived here about a month; my home is on the banks of the Black River. I know of no one near here who keeps bees, and I think from the surrounding orchards and timber lands that it would be a good place for them.

MICHIGAN.

ANSWERS.—1. Probably nothing will be better than to get Italians. If black bees are plenty around you, you will be likely in a short time to have mostly crosses or hybrids, but they will render a good account of themselves.

2. Before time to get them, you will find plenty of reliable dealers represented in the advertising columns of this journal. If you already have bees and desire to get a queen or queens to improve your stock, then it doesn't matter much whether you get from near or far, the postage being the same, altho the preference should be given to one not too far off. But if you want to get a full colony of bees, then it makes a great difference, for express charges are enormous when bees are shipt a great distance, so, other things being equal, the nearest place is the best.

3. Better not start with more than two.

4. Don't think of getting them before spring. The risk of wintering will then be over.

5. Perhaps the 8 or 10 frame dovetailed; not because necessarily better than everything else, but because good, and, being among the most common in use, easily obtained.

When is it Best to Move Queen-Cells?

When is the best time to move a queen-cell so as not to injure the queen? WISCONSIN.

ANSWER.—Your question probably refers to the age of the occupant of the cell, for the time of day makes no difference, except that the cell should not be handled at a time when there is danger of chilling the young queen. With sufficiently careful handling there is no danger at any stage of the queen's growth, but if the cell should be dropt at a certain stage there might be a deficient leg or wing. The worst time would probably be soon after sealing, and the nearer maturity after that time the less danger.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS

PUBLISHT WEEKLY BY

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

VOL. 39. DECEMBER 14, 1899. NO. 50.

EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

What this Journal Stands For.—We think we are not often given to self-flattery, nor to praising unduly the qualities of the American Bee Journal. We always prefer to allow others to extol our virtues and those of this journal, if there are any such that deserve mention.

In the first place, we want this journal to stand for the right and against the wrong, all the time. It is here, also, to represent the interests of the great industry of bee-keeping. It does not push any particular bee-supply business, but gives to each and every dealer and manufacturer who patronizes its advertising columns a free and fair field. Its publishers do not, thru its columns, enter into competition with those bee-supply dealers who pay their money for advertising space. Hence, the American Bee Journal is not a "house-organ"—used to boom the sale of bee-keepers' supplies in the interest of its publishers, as do some papers—but it endeavors to give, every week, lots of the best information obtainable for the advancement of practical and profitable bee-culture.

We say the foregoing because we know better than any one else the motives back of the printed pages of the American Bee Journal, and we believe that we need only to remind bee-keepers thruout the land that this journal stands for *their* interests, when they will continue to give it their loyal support. Not only will they do that, but we believe they will do what they can to extend its circulation, and thus aid in greatly widening its usefulness and helpfulness among the bee-keeping fraternity.

The time for renewing subscriptions for another year is now here. We want to invite every one of our present subscribers to go on with us in 1900, and also suggests they get their bee-keeping friends and neighbors to "enlist" with them.

Remember, you will receive 52 copies of the old American Bee Journal for only one dollar. While nearly everything else is going up in price these days, this journal for 1900 will be mailed for the usual low amount—a dollar bill.

We are hoping that by another spring it will have the largest circulation of any bee-paper on earth. It now stands second, we believe. We think its readers feel it should stand at the head in circulation, as well as in age. It can easily be done, if only each of our present subscribers would send just one new subscriber. Why not do it before Jan. 1st?

Honey-Dew for Winter Stores.—For the second time in more than 25 years, F. Greiner says they have had a big flow of honey-dew in his part of New York, and he seems anxious as to its effects upon wintering. He says in Gleanings in Bee-Culture:

"Honey-dew is rather unreliable winter food for bees, to judge from experience. Colonies provisioned with such are not in good condition to be taken into cellars, unless they are taken out several times during the winter and given flights, and then the result might be questionable.

"Should the winter turn out to be a mild one, or should there be a number of warm days or spells at intervals of three or four weeks, everything will probably work well with out-door wintered stock, for I do believe that, aside from the food question, our bees will be in excellent condition. They will start into winter with many young bees, breeding having been kept up to a later date than usual."

The other time they had honey-dew some seven or eight years ago, the following winter was open, giving frequent flights. Bees wintered out-doors came thru in the very best condition. Those in cellar that were put out in February were all right, those brought out later were the worse for the longer confinement. This time he didn't intend to take any chances, and was going to take away what he could of the honey-dew and feed sugar syrup.

Selling Honey.—W. O. Victor, a Texas bee-keeper who has had as many as 600 colonies at one time, and who has sold 56,000 pounds of honey in a single season, says in the Bee-Keepers' Review that he thinks the commission man a necessity for the beginner. When his crop first exceeded the local demand, he found the commission man very convenient. In the past 15 years he has sold hundreds of tons of honey, and thinks $150 would cover his total loss.

In one instance he shipt to a commission firm, and received returns at $1.00 per case of 12 sections. Seeking the customer who bought the honey, he found it had been sold for $1.50 per case. Instead of quitting the commission firm he went to them and told them that thereafter he would name the price and they should sell at that or hold the honey subject to his order, and they had since sold hundreds of dollars worth of honey for him.

In another case he shipt 60 buckets of chunk honey to a firm. Calling at the place incognito, he found the buckets markt 1½ to 4 pounds more than the actual weight, and an enterprising salesman told him the honey was from California, and only 50 buckets were left out of 500 received the week before! Then Mr. Victor drew from his pocket the letter acknowledging the receipt of the honey. Tableau!

Bees and the Pollenization of Fruits.—In a new periodical, called the Poultryman and Pomologist, we find the following item on the pollenization of fruits, giving particular credit to the bees in this important work:

"The pollenization of fruits is a subject to which fruit-growers should give more attention. Last year, on a large

field of strawberry-plants, I grew only buttons, and my loss on the crop was several hundred dollars. During the blossoming period it rained most of the time, so there were only a few days of sunshine when the bees could work in them. There were no bees kept very near the field, and I have reason to believe that the cause of the imperfect pollenization of the blossoms was that there were not enough bees to do the work in the few days that the sun shone when the plants were in blossom. It is evident that twice the number of bees would have fertilized twice the number of blossoms in the same time, and therefore it would have been profitable for me to have had more bees in the field. I made the mistake of depending upon the bees kept by a neighbor living a considerable distance from me, when I should have kept a few hives on my farm. More bees would have been working in the field, more blossoms would have been pollenized, and the result would have been larger berries.

Experiments have shown that if the blossoms of pistillate varieties are covered so that bees or insects cannot get to them, they will bear no fruit. From the experience of a rainy season we learn the importance of having plenty of bees close at hand to do as much as possible when the sun shines. Last year some orchards on farms where there was a large apiary, bore good crops of fruit, and other orchards in the vicinity bore no fruit, which seems to prove that the bees are needed for the orchard as well as for the strawberries.—W. H. JENKINS."

Bee-Journals for Bee-Keepers,—In the Canadian Bee Journal Mr. J. D. Evans gives his ideas as to what a good bee-journal should be. Three specifications:

1. "It should strictly exclude from its columns all reports of big crops; they are seldom true, and always misleading." (Rather tough on the veracity of bee-keepers.)

2. "It should honestly publish failures." (Is the truth to be told when one has a failure, and suppress when one has success?)

3. Reports of conventions "should not be printed in full, but only a synopsis containing the practical points brought out." (But "there are others," Mr. Evans, who consider the *very best* feature of the Canadian Bee Journal its full convention reports.)

Mr. Evans further says: "I know of no journal publisht entirely in our interests. If the publishers of bee-papers are not induced to boom the profession in order to have more customers to whom they may sell supplies, or from whom they may buy cheap honey, the desire for a larger field from which they may secure subscribers produces the same result, but would we be any better if the Canadian Bee Journal came under the control of the Ontario Bee-Keepers' Association? I am afraid not. I doubt whether we could agree as to what should be inserted therein."

In Germany, where a large proportion of the bee-journals are run by bee-keepers' associations, they do not seem to differ from the bee-journals of this country in this regard, unless it be that they do a little more toward urging bee-keeping for all. Whether the climate of Canada differs greatly from that of Germany in this respect may never be certainly known, unless the Ontario association should become the publisher of a bee-journal.

Start the Children in Bee-Keeping.—In the Country Gentleman of recent date we find the following paragraphs written by L. W. Lighty, of Adams Co., Pa., which we particularly wish parents to read:

Parents make a big mistake when they keep their children dependent until they are full grown. Give that 10-year-old boy a pen of pure-bred fowls, and the 13-year-old girl two colonies of pure Italian bees, and buy the products at market price and pay them in cash. Sell them the feed and supplies, and you will be astonisht at the business talent they will develop. Nearly always one member of the family will take a delight in the bees, and undertake to manage them.

Many farmers have a pleasant little home at one end of the farm for their hired man. He generally has a garden and lot, and if the proprietor does not wish to keep bees, it might be quite an incentive to the hired man if he or his family were allowed to make some money from a small number of colonies. The bees would be a benefit to the land-owner, especially if he were growing fruit.

Start with one or two good colonies, but do not have scrubs or cross, malicious hybrids. Good, thorobred stock pays just as well in the bee-yard as in the poultry-yard or cow-stable.

We want to emphasize the suggestion that the children be encouraged to "take to bees." Many of them will be wonderfully pleased to have one or more colonies all their own, and manage them alone as far as possible. It will pay to interest the children in a way that will help to keep them in the country, instead of their crowding into the unhealthy cities with their awful competition in all lines of work and business.

Begin this winter to interest the boys and the girls in bees, and when spring comes again, give each a colony of bees, or something else, to manage as their own, and thus let them learn how to plan and carry on business early in life. Of course, they will often need your helpful counsel and wise advice, and you will greatly enjoy giving them all they may require.

We believe fully in the boys and girls, and want to enter a strong plea that they be started in business for themselves while under the care and direction of blessed home influences.

A Record for Extracting is given by Harry Howe in Gleanings in Bee-Culture. He and three others of W. L. Coggshall's hands (one of them Mr. Coggshall's youngest son, weighing 70 pounds) extracted 1,400 pounds in 75 minutes—more than 1,100 pounds an hour. At another time a boy and a man extracted 2,500 pounds in a day. But the best record is 900 pounds an hour for two men.

The Weekly Budget

HON. EUGENE SECOR, of Winnebago Co., Iowa, reported "the first snow of the season" Nov. 30—Thanksgiving day.

* * * * *

"SHORTER SPELLING."—Stenog says in Gleanings in Bee-Culture:

"Dr. Mason favors a shorter spelling, but adds: 'If I were to try this new-fangld way I'm sure I'd make a failur of it.' He calls it 'od.' But that spells *oad*. He means *ahd!*"

That those two men cannot agree as to the spelling of "odd" seems odd. Must be a matter of locality!

* * * * *

MR. G. M. DOOLITTLE, of Onondago Co., N. Y., wrote us as follows Dec. 4:

"I have been badly crippled with rheumatism for the last three or four weeks, so I have not been able to take the intended rest by hunting and tramping. Then a week or 10 days ago I threw my left shoulder out of joint, and have what the doctor calls a 'dislocated shoulder.' He comforts me by saying 'it is nothing serious, but may be quite annoying.' But the annoying part *feels* quite serious at times."

Mr. Doolittle seems to have been somewhat unfortunate with his bones the past year. We believe he broke one or two ribs awhile ago, and now he has been "striking out" too hard, we presume, "over the left," and has to suffer the consequences. It seems to us that a "big, fat boy" like Mr. Doolittle, ought to go slow, and take better care of himself.

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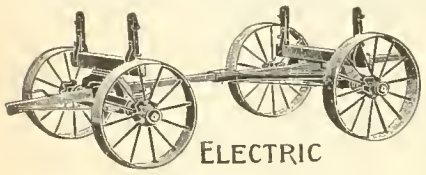

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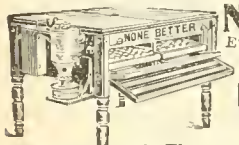

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We can fill orders promptly for these jars. They give excellent satisfaction, we know, for we have used the same jars for several years.

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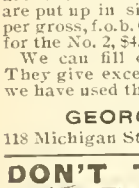

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BEEDOM BOILED DOWN

Don't Put Off Putting Bees in the cellar, says Editor Hutchinson. Leaving the bees out till severe weather, is far from desirable. For several years he has cellared his bees about Nov. 20. This year he put eight colonies in a clamp the *2nd* of November, and promises to tell how they come out next spring. If they all die, Mr. Hutchinson, it will hardly prove that Nov. 2 is too early, for some very warm weather has been since that date this year, and a long spell of warm weather may be harder on them than freezing weather.

Queen-Traps are strongly commended in Bee-Keepers' Review by W. E. Flower, the man who gave the magic-lantern lecture at the Philadelphia convention. Especially does he think them desirable for that large class of bee-keepers, lawyers, ministers, doctors, merchants and mechanics whose occupations will not permit them to be at home when the bees swarm. With the trap the bee-keeper easily finds the queen of the colony that has swarmed, and he knows *whence she came*. By the use of traps he has not lost a swarm or a queen in ten years.

To Start Bees in Sections in desperate cases, some might like to try the plan given by A. J. Wright, in Gleanings in Bee-Culture:

"When you are ready for section work, cage the queen, giving enough 'Good' candy to last two or three days. Put on your super of sections with bait, if convenient. On top of this super place an empty one, in which put the caged queen. The bees will begin work in the sections *at once*, and will keep at it as long as there is nectar coming in. The empty super and cage should, of course, be removed as soon as the queen is liberated."

Localities Differ as to Pollen.—R. C. Aikin says in the Progressive Bee-Keeper:

"Alfalfa yields almost no pollen whatever, and during the honey-flows *here* there is very little pollen gathered or to be had. To have combs overloaded with pollen is a thing I have never known in my present field. I sometimes think I would have much more rapid breeding in the spring if

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if you have the right kind and know how to handle it. The best kind and the best way to make money with them is told and fully illustrated **Poultry Guide.** in our Mammoth Annual

Tells all about 30 varieties of fowls, and their treatment in health and disease; plans for poultry houses, recipes treating all diseases, etc. Gives lowest prices on stock. Sent for 15c.

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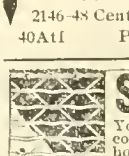

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Root's Column

Bee-Keeping in Colorado.

The editor of Gleanings in Bee-Culture, Mr. E. R. Root, has just returned from the Denver Bee-Keepers' Convention, and reports that he has secured some 50 views of Colorado scenes, apiaries, homes of the bee-keepers, etc. Many of these will find place on the pages of Gleanings in Bee-Culture during the coming year.

Prize Pictures.

In Gleanings of Dec. 15 we expect to give pictures of the two best-looking editors in all beedom. (Gleanings representatives will not be in it, of course.) Good looking girls will vie with them in good looks, on other pages.

Clubbing Rates.

As an inducement for our subscribers to renew before the expiration of their present subscription, which saves us considerable time, we offer the following rates for Gleanings one year and a year's subscription to any of the following papers at prices mentioned.

For One Dollar Only.

Gleanings and your choice of the following:

American Agriculturist, with Almanac.
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there was more pollen in the hives. I have seen many a colony that did not seem to have an available cell of pollen. I feed much 'chop' to my bees every spring—in Iowa they would not be coaxt to use it. In my location pollen-bearing plants are scarce, pollen in sections is never thought of, and does not occur. The flora is changing, and what applied a few years ago does not now."

Small vs. Large Hives for Comb Honey.—In Gleanings in Bee-Culture D. N. Ritchey, of Licking Co., Ohio, makes a strong plea for small hives. He cites the case of a man who has very large hives, and they swarm and give surplus only once in 5 or 6 years. Only once in 15 years have the large swarms from these hives gathered enough stores to last them thru the winter. In a foot-note the editor says:

"In a word, the size of the brood-chamber depends largely upon the locality, and, secondarily, upon the bee-keeper's peculiar notions. From the mass of evidence that has been produced, I believe large hives are not practical in some localities, in the same way that small ones are not adapted for others. Manufacturers might as well give up the notion that bee-keepers can be driven like a flock of sheep over one road—the road denominated the 8-frame Langstroth hive pure and simple. The proof of the pudding is in the eating; and where large hives give big results in dollars and cents, it is folly to talk small hives; but when the small hives will outstrip the big ones, as seems to be the case in your locality, it is penny wise and pound foolish to discard small for large hives."

Are Robber-Bees Robbers for Life?—The general belief is that when a bee once becomes a robber it never returns to honest ways. Harry Howe, in Gleanings in Bee-Culture, is inclined to discredit this general belief. On his late arrival in Cuba he saw robbers thicker and more aggressive than he had ever seen them at the North. In the hot afternoons, about the only bees to be seen flying were those shiny black fellows—perhaps professional robbers. A walk thru the fields showed but few bees on the blossoms, but of those that were there a good many were those identical "robbers," with their shiny black dress. Pretty strong proof that they were willing to work for a living if they could get a job. He further says:

"Another point I should like the advocates of the 'once a robber always a robber' idea to explain. What becomes of them when a honey-flow commences suddenly, as it often does, from basswood, for instance? One day the robbers may follow one around the apiary by the hundred, pitching into every hive that is opened. In a day or two basswood is out, and one can leave honey anywhere in the yard, and not a bee will look at it."

The New York Bee-Disease, or the disease now prevailing among the bees of that State, is thus clearly described by the bee-inspector, N. D. West, in Gleanings in Bee-Culture:

"We have, I think, more than one kind of disease on the ground, and yet there seems to be a tracing from what I have called pickled brood, all the way along from bad to worse, and in different stages, until at last it so closely resembles foul brood that it is difficult to draw the line between this and the genuine foul brood, altho some of the dead brood will be found at times to be flattened down into the cell, and will be about the color of white glue, and will, when a toothpick is placed in it, draw out from its cell from ½ to ¾ of an inch. But you have to hold the toothpick with an object in view, and try to get it to string out or it will not follow the toothpick at all. Some of this becomes coffee-colored, and is rotten in the cell, and will string out some, but it will not break and spring back like rubber; neither do the combs, when held close to the nose, give off that offensive and sickening odor that I get from what I call the old-time foul brood.

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WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

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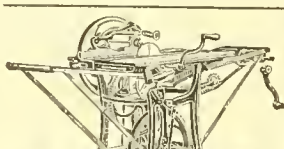

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(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

Why Own the Novelty Knife? In case a good knife is lost, the chances are the owner will never recover it; but if the Novelty is lost, having name and address of owner, the finder will return it; otherwise to try to destroy the name and address, would destroy the knife. If traveling, and you meet with a serious accident, and are so fortunate as to have one of the Novelties, your POCKET-KNIFE will serve as an identifier; and in case of death, your relatives will at once be apprised of the accident.

How appropriate this knife is for a present! What more lasting memento could a mother give to a son, a wife to a husband, a sister to a brother, or a lady to a gentleman, the knife having the name of the recipient on one side?

The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

How to Get this Valuable Knife.—We send it postpaid for $1.25, or give it as a Premium to the one sending us THREE NEW SUBSCRIBERS to the Bee Journal (with $3.00), and we will also send to each new name a copy of the Premium Edition of the book, BEES AND HONEY. We will club the Novelty Knife and the Bee Journal for one year, both for $1.90.

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A wide-awake, practical Western paper for wide-awake, practical Western farmers, stock-raisers, poultry people and fruit-growers, to learn the science of breeding, feeding and management. Special departments for horses, cattle, hogs, sheep, poultry and dairy. No farmer can afford to do without it.

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Thin Flat-Bottom Foundation
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Being the cleanest is usually workt the quickest of any foundation made.

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SWEET CLOVER
And Several Other Clover Seeds.

We have made arrangements so that we can furnish Seed of several of the Clovers by freight or express, at the following prices, cash with the order:

	5lb	10lb	25lb	50lb
Sweet Clover (white)	60c	$1.00	$2.25	$4.00
Alsike Clover	75c	1.40	3.25	6.25
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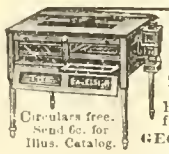

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The hive, when opened, or a comb held close to one's nose, will give a kind of sour smell, or odor; but one of these coffee-colored, rotten brood, when removed from the cell and held close to the nose, will have a sort of rotten smell *only*. But take a hive full of brood, three-fourths of it good brood and one-fourth of it bad brood, as described above, and place it on top of a pretty good swarm to hatch; place a queen-excluding zinc between the hives, and keep the queen below, and in due time the brood above the excluder will all be hatcht out, and all of the bad brood will be cleaned out of the combs, and no more trace of the bad brood is seen in these hives that season. This has been my own experience in my own apiaries this season, and these colonies in the lower hives were slightly affected, as well as the brood placed on top of the colonies."

Conditions Favoring Cure of Foul Brood.—Inspector West, of New York State, is puzzled to know whether the disease that is making so much trouble, resulting already in the destruction of hundreds of colonies, is one disease in various degrees of severity, or several diseases. There is no doubt that foul brood does not in all cases show the same degree of virulence, and the belief has been advanced that where the disease has prevailed for some time the bees acquire a certain degree of immunity. In any case, some remarks that Mr. West makes in Gleanings in Bee-Culture, about the disease that is troubling New Yorkers, seem to apply equally well to foul brood. A strong colony, especially one strong with young bees, makes a better stand against the disease than a weak one. The flow of honey is important. The disease seems, to a certain extent, to ebb and flow with the flow of honey. A good flow of honey seems to lessen the amount of diseased brood, which again becomes more plentiful when the flow is over: There seems to be an advantage in large hives with an extra supply of honey always in sight.

Mr. West says: "I do have some fears that this malady may clean us all out of bees; but I have faith, and hope that, if we reach a good honey season, this dreaded disease may practically disappear."

Editor Root makes out a pretty clear case that the New York disease is not foul brood.

GENERAL ITEMS

Results of the Past Season.

I commenced the summer of 1899 with 35 colonies in good shape, and one a little on the weak list. We had no frost after April 17, and everything seemed to bloom profusely, but the bees didn't seem to accumulate as they should, so they didn't begin to swarm until July 1, and I didn't get but 4 swarms, making an even 40 colonies. I obtained 937 very well filled sections, or 26 per colony, spring count, which I sold readily at home for 12½ cents per section. They were well filled, many weighing one pound and one or two ounces. I think the whole crop would hold out to one pound to the section. IRA SHOCKEY.

Randolph Co., W. Va., Dec. 1.

A Kansas Report.

I send you a photograph of my apiary. You will notice that part of the hives are under a shed, packt for winter. All the hives face the south. I have 22 colonies. I leave the super on with the quilt on top of the brood-frames, then a chaff cushion over the quilt. At the back of the hives is a space of one foot packt firmly with fine hay; also packt the same between the hives. On top of the hives I have large

chaff cushions; later on I will put hay on top of the cushions.

My bees did well for this part of the country, considering the season. I sold about 700 pounds of comb honey near home at 12½ cents per pound, leaving a balance of 75 pounds for home use. I used both the tall and the square plain sections with fence separators.

I came to Kansas two years ago from Nebraska, having sold all my bees before leaving. I purchast four colonies here, and increast by natural swarming to 10. Last winter being pretty severe on the bees, I lost five colonies. I now have 22 colonies. A short distance south of my bee-yard is a field of 100 acres of alfalfa; west are 80 acres more. I have also some of the Rocky Mountain bee-plant near, and many fruit-trees set out in the yard, such as cherries, apples, pears, peaches and apricots, and along the west side currant bushes.

I wish to say that if I had not read the American Bee Journal long before I kept bees I do not know that I should have handled or kept them at all.

C. H. PETTENGELL.

Phillips Co., Kans., Nov. 9.

[The photograph of Mr. Pettengell's apiary was received, but it was not clear enough to make a good engraving.—ED.]

Report for the Past Season.

I came thru last winter with 27 colonies, having lost but one; these increast to 35, besides producing over 3 000 pounds of surplus honey. O. P. BEARDSLEY.

Polk Co., Oreg., Nov. 22.

Buckwheat Helps Him Out.

This has been one of the worst years for bees in Vermont that I ever knew, but buckwheat came to my rescue, and the bees have plenty to winter on, and gave me 3,500 pounds of honey from 144 colonies, spring count. A. W. DARBY.

Grand Isle Co., Vt., Nov. 24.

Results of the Past Season.

My eight colonies of bees, spring count, increast to 16, and I extracted 250 pounds of honey of a dark color.

I like the Bee Journal and take the time to read all of it. F. B. WEDEL.

McPherson Co., Kan., Nov. 22.

What About Mesquite?

Will some southwestern subscriber tell us thru the American Bee Journal all about the mesquite as a honey-plant, time of blooming, duration of flow, and amount of honey per colony an apiary will average from it, in an ordinary season?

JOHN LEFLER.

San Bernardino Co., Calif.

Bees Did Little This Year.

Bees did little the past season in this part of the country, and I fear they have gone into winter quarters rather poor.

Polk Co., Tenn., Nov. 23. M. T. FOUTS.

His Colonies Surprised Him.

This is my second year of bee-keeping. Last year I had to feed 3 colonies out of 4. Last spring I started with 4, and one cast a large swarm July 19. I lost the old colony thru a misbred queen, but the 3 colonies surprised me, for I got 90 pounds of white and about 170 pounds of amber honey from them, and 10 to 12 pounds from the new swarm; besides this the brood-chambers were entirely filled.

Rock Co., Wis. CHAS. LUEBKE.

A Fairly Good Season.

This has been a fairly good year for bee-keepers in Missouri. I had some over 3,000 pounds of honey the past season—

A GOOD WATCH

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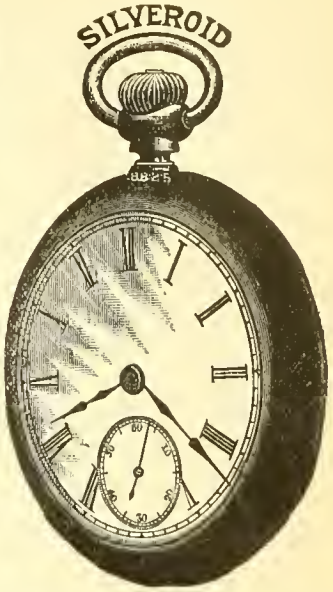

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We offer this watch, prepaid, for only $3.50; or we club it with the Bee Journal for one year—both for $4; or we will send it FREE as a premium for only 8 NEW subscribers to the Bee Journal for a year (with $8.00). This is indeed a bargain. The watch would make a fine gift.

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mostly white clover—2,000 pounds of comb and the balance extracted. The demand has been good, and so the honey is mostly sold. I have 55 colonies in good condition on the summer stands. I have lost only two colonies in nine years in wintering.

I want to thank you for the American Bee Journal. May it live long to do good. H. C. MIDDLETON.

Dekalb Co., Mo., Nov. 22.

Another Poor Honey-Year.

This has been another poor year with the bee-keepers in this part of the State, as bees have not accumulated enough to eat since June 3, and the loss in queens has been quite heavy. I lost 17 in swarming-time, and bought only 7. I have 42 colonies, and bought one barrel of sugar weighing 370 pounds, paying $19.73, and in 10 days three-fourths was carried into the brood-chambers. J. H. ALLEN.

Nansemond Co., Va., Nov. 29.

A Good Year for Bees.

This was a very good year for bees here. I had 33 colonies, spring count, increast to 60 colonies, and got 1,000 pounds of comb honey and 2,000 pounds of extracted. I sold all of my honey in the home market—comb at 10 and 12½ cents per pound, and extracted, 9 and 10 cents. I will send a photograph of my apple-orchard apiary of 60 colonies, showing about two-thirds of the colonies. JOHM N. MICHAEL.

Caldwell Co., Mo., Dec. 1.

[Mr. Michael has a very nice apiary, but the photograph was not clear enough to make a good engraving, else we would reproduce it.—EDITOR.]

Poor Year But Fair Crop.

This year has been poor for honey. Some of the bee-keepers got none, but I got 700 pounds of nice comb honey from 15 colonies, spring count, and 5 prime swarms, by what I learned from the Bee Journal.

O. F. ARNOLD.

Chenango Co., N. Y., Dec. 4.

The Bee Journal Suits Him.

I am more than pleased with the American Bee Journal. I cannot do without it, and I can't see how any other bee-keeper can deny himself so much good bee-reading and valuable information, when it is so cheap—only one dollar. I have 300 colonies of bees. The American Bee Journal is my teacher, and the main cause of my success in bee-keeping. ISAAC HAYS.

Yakima Co., Wash., Nov. 29.

Has Been Successful.

I have been a bee-keeper for 10 years, starting with two colonies of bees, and now I have 55. I have had splendid success.

WM. DECKER.

Nodaway Co., Mo., Nov. 26.

Too Much Rain for Bees.

I have received but little honey from my bees this year—about 1,000 pounds from 109 colonies, and stores enough for winter. We have had too much rain nearly all spring, summer and fall. T. H. WAALE.

Clarke Co., Wash., Nov. 29.

Bees Hardly Paid this Year.

Bees have hardly paid this year. I have handled bees for the last 30 years, but this has been the poorest year for honey I ever had. I handled this year about 160 colonies of bees, and got about 3,000 pounds of extracted and about 500 of comb honey. I had only four new swarms this year. My bees are all packt for winter, and have plenty of honey to winter on, altho they are very light in bees, not having bred up in the fall. W. W. TAYLOR.

Ottawa Co., Ohio, Dec. 4.

His Bees Did Fairly Well.

We are having Florida weather now, and the bees are enjoying it. Yesterday they carried pollen. My bees are in good shape for winter. I have them on the summer stands. We had a short honey harvest last summer, altho I did fairly well. I got 1,000 pounds of comb honey and over 600 pounds of extracted, from 43 colonies, and have it all sold at 15 and 16 cents per pound, in Washington, D. C. L. A. HAMMOND.

Washington Co., Md., Dec. 4.

The Des Moines Incubator Co.—As an evidence of the universal interest taken in artificial incubation, and the confidence which the whole world places in American-made incubators, we refer to an order recently received by the Des Moines Incubator Co., of Des Moines, Iowa, thru their New York agents, for a shipment of 14 machines to go to parties in Sydney, Australia. Better send to them for their attractive catalog, and see the good things they have to offer. Always mention the American Bee Journal when writing, please.

The Hawkeye Incubator Co., of Newton, Iowa, is one of the younger concerns, full of vim and enterprise, manufacturing incubators. They make very broad claims for their None Better Incubator, claims which we believe the machine and the company can make good. They are making a special claim for simplicity and durability—points which every purchaser will readily appreciate. They send their catalog free. Write them for it, and say you saw their advertisement in the American Bee Journal.

Illinois.—The executive committee of the Illinois State Bee-Keepers' Association have changed the date of the ninth annual meeting to Dec. 26 and 27, 1899. It is understood that all the railroads will make half rates during the holidays. The State Horticultural Society and the State Teachers' Institute hold their annual meetings at the same time, and all at the State House, so that it will be a great inducement for a good attendance. We expect to have a fine program for the occasion, and a good time, as bee-keepers always do when they get together. Come, everybody!

LATER.—Since the insertion of the previous notice the railroads, thru the Western Passenger Association, have refused to make a single fare rate for the round trip, but made the rate of one fare and a third for the round trip. If any one when purchasing a ticket is refused the one-third rate for the round trip, he must demand a certificate showing that he paid full fare coming, and together with the Horticultural Society we expect to have much more than 100 in attendance, and thereby get the above-named rate.

Bradfordton, Ill. JAS. A. STONE, Sec.

Michigan.—The annual meeting of the Michigan State Bee-Keepers' Association will be held at Thompsonville, Benzie Co., Jan. 1 and 2, 1900. There will be reduced rates on all railroads, and a special rate has been secured at all the hotels there at 75 cents per day. There will be an exhibition of the famous willow-herb honey, also of all the leading supplies used in the apiary, and latest improved implements. At least two, and perhaps three, of the A. I. Root family will be present, and other noted men. Everything indicates the largest meeting held in years. The subjects discust will be those nearest the heart of the bee-keeper, so come prepared to give your views, in exchange for the views of others. It will more than repay you for all the time and expense to attend.

Fremont, Mich. GEO. E. HILTON, Pres.

New York.—The 34th semi-annual meeting of the Seneca County Bee-Keepers' Association will be held in K. O. T. M. Hall, at Romulus, N. Y., on Tuesday, Dec. 19, 1899, at 10 o'clock a.m. Among the subjects and those to discuss them are these: "Comb vs. Extracted Honey for Profit," J. C. Howard, followed by H. L. Lyke. "Why I Quit the Bee-Business," B. D. Scott, Fred S. Emens, J. F. Hunt and Natt Sutton. Prospects for next season, H. McLallan. Frank Benton, of Washington, D.C., Assistant Entomologist U. S. Department of Agriculture, will be present and address the meeting at this time, and take part in the discussions.

Romulus, N. Y. C. B. HOWARD, Sec.

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Box, filler and directions with each pen. Every pen guaranteed for one year, by the manufacturers.

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To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

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Offer No. 1. We will mail Fountain Pen No. 2110 free as a premium to any one sending us THREE NEW subscribers to the American Bee Journal for one year, with $3.00 to pay for same; or we will club it with the American Bee Journal for one year—both for $2.00.

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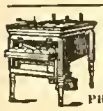

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J. M. Jenkins, Wetumpka, Ala.

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IT IS SURE TO EXERT A POWERFUL INFLUENCE FOR GOOD

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NEWS AND GOSSIP OF A NEW BOOK ON THE BIBLE have been current in book and Christian circles everywhere for some months In its authorship was to be combined the superb talents and literary abilities of three of the greatest lights in the world of religious literature.

The book is about to appear and on its title page in collaboration as authors are found the names of that most popular of all writers, IAN MACLAREN (Rev. John Watson), together with **H. M. WHARTON, D.D.**, the great Evangelist, and **J. WILLIAM BUEL, Ph.D.**, one of the most prominent and popular writers on Biblical subjects. **A MASTERPIECE INDEED** must be the book which calls to its creation such a combination of unmatchable talents. **IT IS A MASTERPIECE**—and it is good news we bring our readers when we tell them that after the most persistent endeavor and the most industrious and earnest negotiations with the Publishers, this paper is one of a syndicate which has secured the entire first edition for distribution among their subscribers, **not as a means of winning profits**, but to encourage the people to become regular readers, because of the unusual privileges which are offered regular patrons.

The book is entitled **"THE GOLDEN MORNING,"** and while it was intended to be a $5.00 book, and has everything about it—authorship, illustrations, paper, printing and binding—to warrant that price, we have, after many objections and refusals, made terms whereby **WE ARE IN POSITION TO OFFER IT TO OUR READERS AT A GREAT REDUCTION.** It contains nearly 800 pages and over 500 superb illustrations. It is printed with clear type on coated paper, and is bound in beautifully illuminated covers, with gold and colored stamping.

IT IS IN REALITY THE BIBLE IN STORY FORM arranged so as to assure a perfect understanding of **THE GREATEST OF ALL BOOKS** even by little children. All ambiguous and obscure phrases and descriptions have been put into language which makes them clear as noon-day. The historic events have been arranged in their proper order, and the story is made continuous and of absorbing interest throughout. Poetical description so freely used in the Bible, and the many Parables, have all received analysis and now appear as plainly told tales which need no interpreter or explanation.

Hundreds of artistic and accurate pictures have been used to embellish its pages and fix in the mind of reader or student the scenes so graphically described. No book of a religious nature has ever been so sumptuously illustrated. This feature alone costing an enormous sum of money, as every drawing was made especially for this work.

It will be of highest value to the young, as from a few readings, they will get such an understanding of Bible truths and promises from this book, that it would require years for them to gather through Bible reading or study. Indeed, one of the chief claims of **"THE GOLDEN MORNING"** to universal popularity, is that the children will learn to reverence and love the Bible and to accept its teachings through reading this charmingly written story.

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Address, GEORGE W. YORK & CO.
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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Nov. 24.—There is a firm tone in all kinds of honey, even buckwheat sells easier than of yore. 16c is obtainable for the best white comb which we class as fancy, and 15c for No. 1 grade; stained and off grades of white, 13@14c; amber, 10@12c; and dark to buckwheat, 9@10c. Extracted white clover and basswood, 8@9c; amber, 7@8c; dark, 6@7c. Beeswax, 27c.
R. A. BURNETT & Co.

CINCINNATI, Nov. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth

KANSAS CITY, Nov. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK, Oct. 20.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:
Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CLEVELAND, Dec. 1.—Fancy white, 16@17c; No. 1 white, 15@16c; No. 1 amber, 13@14c; No. 2 amber, 12@13c; buckwheat, 9@10c. White extracted, 8@9c. A. B. WILLIAMS & Co.

SAN FRANCISCO, Nov. 22.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

BOSTON, Dec. 8.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.
There is very little now to report in the line of our honey market. The retail trade are loath to pay the higher prices and are buying in a very small way, still the demand is fully equal to the supply. BLAKE, SCOTT & LEE.

ALBANY, Nov. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Nov. 18.—The November trade has up to the present not been as good as was expected, and shows a falling off from October. It seems that the somewhat higher prices this fall are affecting the consumptive demand to some extent, still the warm weather yet prevailing in this part of the country may also be partly responsible for it. While trade has been light, prices have been well maintained, nobody being burdened with stock to such an amount as to become oppressive.
Fancy white still going at 14@14½c, and light amber 1 cent less. Extracted, white, 8@8½c.
PEYCKE BROS.

DETROIT, Oct. 18.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
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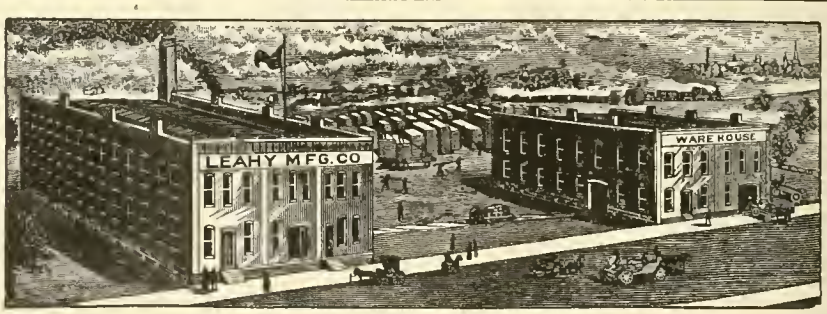

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39th YEAR. CHICAGO, ILL., DECEMBER 21, 1899 No. 51.

CONTRIBUTED ARTICLES

A Bee-Fever that Resulted in Two Apiaries.

BY W. H. HEIM.

I FIND apiculture a very pleasant and instructive as well as profitable business in connection with my other duties, as I am employed by a candy manufacturing company. It may seem very strange to get the bee-fever in a candy factory, but it is a fact, and I am going to tell how it happened. June 20, 1894, there came a run-a-way swarm of bees to our candy factory. A large walnut tree is standing in front of the building, on which clustered this swarm of bees. It was about 4 o'clock in the afternoon, and at 5 o'clock the factory whistle blew—not to give an alarm of fire, but simply to quit work. I then got a small box ready, and up the walnut tree I went 35 feet after that swarm of bees, without bee-veil or gloves; and with a pocket-knife I cut off the limb on which the swarm of bees had clustered, put the bees into the box, and took it to my home. The next day out came the swarm, not being satisfied with the small box. I then got a Simplicity hive from a bee-keeper, and successfully hived them.

Then followed what you may call a genuine case of bee-fever, and I am sorry to say that the fever is as bad as ever.

Picture No. 1 shows what is now my home apiary of 22 colonies in the back ofmy lot, which is very small—only 50 by 90 feet—yet I think that 30 colonies could be managed on this small space of ground. My apiary is located on the west and north sides; on the south (which is not shown) is my poultry-yard, where I keep several varieties of poultry, as bees and poultry are my pleasure. Here I spend all my leisure time in looking after them.

My home apiary is chiefly managed for rearing queens and producing comb honey. The past season I tried the plain sections, also the $3\frac{5}{8}$x5x1$\frac{1}{2}$, or the Ideal super, and find a good sale for honey in these sections. My honey crop was very light, as it was a very poor season in this vicinity.

My out-apiary is located about 8 miles from here—on my father's farm. It has 32 colonies, and is managed for both comb and extracted honey. My father, who has been a bee-keeper for about 40 years, is still interested in bee-keeping. I am sorry that he was not working in the apiary when I took this picture. I give him the credit for managing it for me. It faces the south, near an apple orchard—a splendid locality to build up a large apiary.

Lycoming Co., Pa.

No. 2—Mr. W. H. Heim's Out-Apiary.

No. 1.—Home Apiary of Mr. W. H. Heim, of Lycoming Co., Pa.

No. 1.—The Bee-Hive. How to Get the Most Out of It.

BY "OLD GRIMES."

A BEE-HIVE under the popular understanding of the term, is a box made of boards, the dimensions, size and shape, are according to the fancy, genius or peculiar ideas of the builder. The common box-hive had its day, and tho there are but few of them

now in use, they are in evidence in some portions of the country.

To get the most out of a hive of whatever construction, it is necessary to select for it good material, and the chief factors are durability, saving in strength in handling, and time in manipulation. In the portion of the country where the writer lives, pine is the best lumber for the purpose, but it seems to me that cedar would be an excellent lumber on account of its lightness, but, whatever lumber is used, that which is light, free from knots, easily workt, and not easy to split or warp, should be selected. Inch lumber should be used, or inch lumber drest on both sides.

I have seen hives made of one-half inch lumber, but they cannot be durable on account of the small holding-place for the nails; so to get the most out of a hive it should be strongly put together. The dovetailed feature of late years seems to be superseding all other methods of manufacture, and the chief recommendation is strength of corner. That is all very true, but it requires special machinery to manufacture them, and the feature is very good for the manufacturers of supplies, for it throws the trade all upon their special machinery; but a hive quite as good can be made on a common circular saw by halving out the ends of the side-pieces and setting the ends into the rabbet so made, and nailing both ways. A hive made in this way will stand the stress of hard usage and inclement weather quite as well as the dovetailed hive. I have seen quite as many corners of the dovetailed hive warpt out of place as I have the halved corner; but then, the dovetailed hive has come to stay, and I am not disposed to find fault with it.

If the outside of the hive is well made, the interior should receive the same attention. I have seen many hives made with very flimsy frames, altho when the comb is built in the frame it has a certain strength, but will hold its shape better when being filled if made strong.

In nailing a hive there is a mistake many times made in being careless in the driving of the nails. Nails should be driven more or less "toeing," for a nail driven in with the grain of the wood will draw out more easily then if put in a little across the grain. Then, a careless driving of the nail will result sometimes in its breaking out at the point, splitting a portion off the board and weakening that portion of the hive. An inexperienced person should not be allowed to nail hives; it is better to pay a little extra and have the work well done.

Then, to get the most out of a hive with comfort and profit to the operator, it should have as few parts as possible. There is a positive loss where a number of parts have to be removed in order to get into the interior of the hive. Some even go so far as to claim the manipulation of hives instead of frames. There may be some advantages in that plan, but it is largely a matter of education, and in accordance with the tastes of the operator.

To get the most out of a bee-hive it should have a well-made telescoping cover, and sitting over at least three inches. It makes but little difference whether the top is gable or flat, provided the roof is not too steep. This cover should telescope not only over the super, but over any portion of the hive.

As to the matter of hand-holes or cleats for the handling of hives, that is a mere matter of taste. Something should be provided, but the simplest and the most out-of-the-way is the hand-hole.

To get the most out of the bottom of the hive it should be elevated a little from the ground, and about as simple and effective a stand as can be made is a half brick edgewise under each corner, and as a preventive of moisture and rot the grass and weeds should be kept down; sprinkling with strong brine is a very good remedy.

To get years of service out of a hive it should be painted. I am aware that in some quarters the contrary is advised, but the parties who advise are so much in the minority that their views are worth but little attention. The experience of a great number for many years is the safest to follow, and that is overwhelmingly in favor of paint. If it is a good thing for the dwelling, and the barn, and the pig-sty, it is as good for the hive. To be sure, a nail now and then in a warpt corner of the hive will tide it along, so a nail in a warpt clapboard on the house will save paint. From experience I know that a continued nailing of the corners will result in split corners, for an unpainted board falls into the habit of checking more than half-way thru the surface. By all means paint your hives, then you can get something out of the hive in making it please the eye. White paint and a white hive amid the foliage of the grounds is one of the pleasures that will follow many a youth when he leaves the home.

Questions on the Dickel Theory Answered

BY C. THEILMANN.

I HAVE received the following letter from Editor York, with the request that I answer it:

MR. EDITOR:—I would like to ask Mr. Theilmann a question or two about that Dickel Theory. I know nothing about it, and am asking for information.

Does Mr. Theilmann claim that the queen lays but one kind of eggs, and the bees make whatever sex they desire therefrom? If so, how is it they cannot hatch a queen from eggs in drone-comb, or from a drone-laying queen or laying-worker eggs? How does he account for a queen turning drone-layer as some do in old age?

The fact that he THOUGHT those eggs he gave to the queenless swarms were all what were called "worker"-eggs, because he had worker-comb, does not prove to my mind that they were all fertilized or worker eggs. My bees often rear drones in cells built out from worker foundation, if there is no regular drone-comb in the hives. With me, new swarms often rear drones almost, if not quite, as plentifully as before swarming.

I am asking for information, not trying to "argufy," so turn on a little more light, please.

Crawford Co., Iowa. E. S. MILES.

The experiments made last July are described on pages 500 and 643. Mr. Miles and those who are interested can there find the information askt, and thus save reprinting the main points about the Dickel-Dzierzon Theory, which, with me, is no more theory, but solid facts proven by actual experiments.

Mr. Miles asks if I "claim the queen lays but one kind of eggs, and the bees make whatever sex they desire therefrom? If so, how is it they cannot hatch a queen from eggs in drone-comb, or from drone-laying-worker eggs? How does he account for queens turning drone-layers, as some do in old age"? Then Mr. M. says: "The fact that he thought those eggs he gave to the queenless swarms were all what are commonly called worker-eggs, because he had worker-comb, does not prove that they were all fertilized or worker eggs," etc.

I will answer the last first by saying that the vitality of old queens is exhausted, and some of the eggs do not contain the generating fluid or sperm in sufficient quantity to generate, and therefore are superseded by the workers.

Young drone-laying queens are not fertilized, and therefore lay unfertilized eggs which produce drones only; the same is true of laying-workers, but neither of the two has any generative power—their eggs will produce drones, but such drones will produce nothing. We have a similar case in the mule, which you all know.

I claim that all the higher class of animals have to be mated in order to have, or receive by that, the generating power. Is it not absurd to claim that drone-eggs (so-called) have no sperm, nevertheless the bee is one of the most intelligent animals we have? My experiments prove clearly that bees can make either sex from what are called worker-eggs, laid by a normal queen, and Prof. Dickel's experiments show that he produced workers and queens from what are called drone-eggs, taken from drone-combs. Who can dispute his claims?

What is a normal queen? It is a queen which is perfectly mated, and can perform all the duties ascribed to her with perfect offspring.

Mr. Miles says that his swarms often rear drones almost, if not quite, as plentifully as before swarming. I have experimented with the same thing, but I never saw a swarm yet, of the many hundreds which I have examined, that reared drones from eggs laid the first five or six days after swarming, even with queens three to four years old; and if any bee-keeper did see such I would like to have him report it.

One of the two stock colonies from which the swarms were supplied did not build any drone-comb at all, and the other built a small batch about two weeks after swarming, but the queen did not lay any eggs in it, and it was partly filled with honey. Both queens were from last year's rearing, prolific and apparently perfect.

Wabasha Co., Minn.

[The following article is from a practical bee-keeper and writer on bee-topics from Texas—Mr. L. Stachelhausen.—EDITOR.]

DZIERZON VS. DICKEL.

On page 643 my old friend, Mr. C. Theilmann, tells of some observations and experiments which he thinks can prove that Dzierzon's Theory is not correct, while Mr. Dickel's is. Observations like those described by Mr. Theilmann I made many times, and many years ago, but they do not prove anything against Dzierzon's Theory.

If we look at the photograph on page 644, we will see

that many empty cells are between the capt brood. This is always a sign that something is wrong. Probably the queen that laid the eggs was worn out, and in this condition laid some unimpregnated eggs in worker-cells. Many times we see on a brood-comb a few cells with higher cappings containing drone-pupæ. I always note these colonies for changing the queen as soon as possible. Sometimes even young queens will lay some drone-eggs in worker-cells at first, and will get all right afterwards. All this was known long ago, and Herr von Berlepsch mentioned it in his book, second edition, page 98, about 30 years ago. Besides this, laying workers cause many mistakes in this respect, especially in Egyptian and Cyprian colonies we can observe that a fertile queen and laying-workers are in the same hive at the same time. So we see these observations can be explained without difficulty.

About the many experiments Mr. Dickel made and recommended, it must be said that they do not prove anything. Scientific authorities have lately proven that Mr. Dickel's theory is a fallacy and not Mr. Dzierzon's.

Fleischman, professor of zoology at the University of Erlangen, says it is simply impossible that a worker-larva can be changed to a drone—something Mr. Dickel asserts—because drone and worker larvæ can be easily distinguisht by microscopic analyses as soon as they leave the eggs. Prof. Blochmann has analyzed, by the aid of modern technic, drone and worker eggs, and proven that, without doubt, the latter is impregnated while the first is not.

Against the scientific proof nothing can be said, and nobody would mention Dickel's theory any more if Mr. Dickel were not the editor of a bee-paper, and does most of the talking himself. D. STACHELHAUSEN.

Bexar Co., Tex.

[So far as the American Bee Journal is concerned this will close the discussion of the Dickel Theory for the present.—EDITOR.]

Larvæ for Queen-Rearing—For What Age Do the Bees Show a Preference?

BY DR. C. C. MILLER.

ON page 725 of Gleanings in Bee-Culture for 1898 I exprest the belief that the common notion that, when a queen was suddenly removed from a colony, the bees were in such haste to rear a successor that they would select larvæ too old, was a mistaken notion. Earnest protests came from those whose opinions were entitled to respect, and some views were attributed to me that I did not hold. On page 427 of this year I defined my position more explicitly, and on page 494 said: "Please watch what bees do when the queen is taken away, and see if they make the mistake of choosing larvæ more than three days old, for queen-rearing." I made the same request publicly and privately elsewhere. I don't know that any one paid any attention to it, and I don't know that I blame such; for, so far as I know, I stood alone in opposing a view in which all the rest were agreed.

Upon one point in dispute, however, I did not stand entirely alone. I said queenless bees start queen-cells when first made queenless, and continue to start queen-cells for several days. Mr. Hutchinson said his bees started all their cells at nearly the same time, and so nearly of an age that the young queens emerged not more than two days apart. Henry Alley said his experience agreed with mine upon this point.

Having askt others to make fresh observations, it was only fair that I should do so myself. It might be I had not been careful enough in previous observations. So I took the matter in dispute to the bees, and took careful notes of their testimony. The important thing was to know somewhat positively the age of the eggs or larvæ used, and the time at which the queen-cells were started.

To No. 84 I gave successively frames of empty comb, noting the time at which a comb was given as well as the time it was taken away. I was not as successful as I should have liked in getting the queen to lay promptly in the combs given. In one case no eggs were laid in the prescribed comb after 24 hours' waiting. The probability is, that in all cases the eggs were laid in the last rather than the first part of the time in which the queen had the comb. That is, if I gave the comb on one day at noon and took it away the next day at noon, very likely most or all the eggs were laid during the latter half of the 24 hours. The crowd of other work upon me will account for the irregular hours at which the work was done.

Allow me to name the different combs by the first five letters of the alphabet. They were given to and taken from No. 84 as follows:

Comb *a*, given June 28, 10 a.m.; taken June 29, 12 m.
Comb *b*, given June 29, 12 m.; taken June 30, 2 p.m.
Comb *c*, given July 1, 4 p.m.; taken July 3, 10 a.m.
Comb *d*, given July 3, 10 a.m.; taken July 4, 10 a.m.
Comb *e*, given July 4, 10 a.m.; taken July 5, 10 a.m.

Each of these combs, when it was taken from No. 84, was put in an upper story of No. 54 over an excluder. No. 54 was a tolerably strong colony with a laying queen. The combs were merely put in this upper story for safe-keeping, the bees taking good care of the eggs and larvæ.

July 5, at 4 p.m., I took from No. 54 its queen and all its combs of brood except the five combs for experiment.

July 6, at 10:30 a.m., I examined to see if any progress had been made. The colony had now been queenless 18 hours 30 minutes, and I found queen-cells started, but not entirely where I expected.

Comb *a* had no queen-cell, neither were any started on it later. Counting that the egg hatches three days after it is laid, the youngest larva in comb *a* must have been at this time about 3 days 22½ hours old, or 22½ hours too old for a good queen, if the scientists are right in telling us that the worker-larvæ are weaned at three days old.

Comb *b* had two queen-cells started on it. The oldest larva in this comb must have been not more than 3 days 22½ hours old, and the youngest not less than 2 days 20½ hours old.

Comb *c* had eight queen-cells. Two of them had hoods built over them, the rest only showed the cells enlarged and an extra amount of pap. No larva in this comb could have been more than one day 18½ hours old. The youngest were probably not more than 24½ hours old.

On the other combs I found no queen-cells.

I very much regret that nothing more precise can be said about the cells on comb *b*. I cannot prove positively that the two cells started on it may not have contained larvæ 3 days 22½ hours old. To make this possible, however, the queen must have commenced laying in this comb the minute it was put in hive 84, while the probability is that she did not begin laying there for some hours afterward. Moreover, the cells were started at least some little time *before* the observation was made, so something must be deducted from their age at starting, on that score. Besides, the fact that four times as many cells were started on comb, *c* as on comb *b*, the larvæ in *c* being less than two days old, hardly looks as if they would *prefer* the oldest larvæ in *b* while at the same time they preferred anything so much younger as the larvæ in *c*. But I must leave others to form their own judgment.

If the bees had askt my advice in the matter they probably would have done somewhat differently. I should have said to them, "So long as a larva is only three days old, it's all right for a queen; and as you're in a hurry for another queen you'd better start all your cells on comb *b*." But they didn't ask my advice.

July 7, 4 p.m. Three more queen-cells on comb *b*. These were started from larvæ 2 days 20½ hours old, or older. No cells were started on comb *b* at any later time.

Comb *c* has 16 cells, two of them being emptied of their contents. No larva in this comb could have been more than three days old at the time of this observation.

No queen-cells on combs *d* and *e*.

July 8, 4 p.m. Comb *c* has another cell, making 15 on it (not counting the two that were emptied).

Comb *d* has its first cell started over a larva that was less than 2 days 6 hours old.

July 10, 11:30 a.m. No additional cells on comb *c*.

Comb *d* three has additional cells, these having been started over larvæ less than 4 days 1½ hours old, and they might have been not more than 30 hours old.

July 11, 8 a.m. Comb *c* has 17 cells. If there is no mistake in previous observations, the two additional cells on this comb must have been built over larvæ at least 4 days 1½ hours old. That would surely be taking too old larvæ when younger were present. There is a bare possibility that these two cells were overlookt before, and were now more easily seen when sealed. But I give it just as I find it in the notes taken more than two months ago.

Comb *d* has six cells, the last two started over larvæ less than 4 days 22 hours old, and possibly not more than 3 days 1½ hours old.

July 12, 9 a.m. Comb *d* has 8 cells, the last two started over larvæ less than 5 days 23 hours old, and possibly not more than 3 days 22 hours old.

Comb *e* has three cells, the first it has had. These cells

were started over larvæ less than 4 days 23 hours old, and possibly not more than 2 days 22 hours old.

July 13, 6 a.m. No additional cells on any but comb *e*, which has now 6 cells, the last three being started over larvæ less than 5 days 20 hours old, and possibly not more than 3 days 23 hours old.

This closes the testimony of the bees, no cells being started later. In some respects it is not exactly what I desired and intended the bees should give, but they are to blame for that and not I. I know very well that this is only a single case, and that the next case might be different, for "bees never do any thing invariably;" but let us see what conclusions may be reacht from the testimony given.

In the first place, it certainly is *not* proven by the testimony given that bees made queenless are in such haste to rear a queen that they at once select larvæ too old for the purpose. Moreover, I have had the matter in mind thruout the season, and in every case the cells first started were over larvæ that were very small. If any one has accepted the challenge thrown out by me to prove that bees at once selected too old larvæ, I hope he will report at once.

It is certainly very clear that in this case, at least, the bees did not start all their cells within about 48 hours' time, as Mr. Hutchinson says his do. The first cells were started *before* July 6, 10:30 a.m. The last cells were started *after* July 12, 9 a.m. From that it is easily seen that the time from the first to the last cells started was six days lacking 1½ hours. It was that much at least, and it may have been more. Henry Alley's experience agrees in this.

While the bees at first select larvæ sufficiently young for good queens, they afterward use some that are too old, continuing to start cells when larvæ of proper age are no longer present. Editor Hutchinson says his bees build cells that he calls "fool-cells," because they are so insignificant and poor, and he does not know how to account for them. If he will observe with sufficient care, I think he will find that they are nothing more nor less than cells started over too old larvæ, probably after larvæ of proper age were no longer present.

I must not evade the observation that, something more than 5½ days after the removal of the queen, the bees started cells over too old larvæ when younger larvæ were present. I might say that sometimes bees hold eggs without hatching for more than three days (Dzierzon says two weeks), but I will not press that.

Until some one brings forward some proof to the contrary, I feel safe in saying that when bees are made queenless they are *not* in such haste to rear a new queen that they select too old larvæ, and that there is no error in selecting during the first five days of queenlessness. If the combs with the cells be taken within the first five days, and put in the upper story of a colony having a laying queen there will be no too old larvæ in the case. If left with the queenless bees till larvæ of proper age are no longer present, they will build cells over too old larvæ—what Mr. Hutchinson calls "fool-cells." McHenry Co., Ill., Sept 29.

[This discussion started originally from my saying, or from some one else saying, that Doolittle-reared queens were to be preferred, because if the bees were left to themselves they would take larvæ too old; and hence queens reared by Nature's method would not average as well as those reared by the Doolittle plan. While I still believe the statement is correct, yet the main prop to support it has been knockt out.

I am always open to conviction; and when any one produces evidence of this kind right from the hive, I cannot see it is any weakness or lowering of dignity to acknowledge my error. It appears then, that if bees have a choice between old and young larvæ, they will select not those which are three days old, as is generally supposed, but those which are just hatcht out, or somewhere about 24 hours old. By the Doolittle method it has been our custom generally to select just-hatcht larvæ; and in so doing we have been in exact accord with Nature; for the bees seem to say, if their preference is any gauge, that the one-day limit is the best.

I have read over the experiments very carefully, and if the Doctor conducted them exactly as he says (and we have no reason for doubting his statement), then he has a pretty strong clincher on his opponents. Until I received this communication I was inclined to believe he was worsted in the argument; but, thanks to his persistency (a quality that seems to be very markt in his make-up), he has not only proved himself right, but has given queen-breeders a valuable pointer as to the proper age of larvæ to be preferred for queen-rearing.

But I said that I still believe that the bees left to themselves would not rear for the queen-breeder as good queens as when reared by the Doolittle method. By the latter a decided preference is given by Doolittle and his followers for the rearing of cells under the swarming or supersedure impulse. Under such circumstances the cells are more lavishly supplied with the royal food than queens reared from the cells made by the bees.

Referring to Mr. Hutchinson's statement that bees build most of their cells within 48 hours' time, my experience says there is a great difference in bees. Holy Lands and Syrians will start 25 to 30 cells within a few hours; and after once being started they seem disinclined to start other cells on succeeding days. Black bees will do most of their cell-starting within 48 hours, and Italians and hybrids, especially the former, will extend the period almost up to the limit of available larvæ that can be *possibly* used for the rearing of queens.

There will be very markt exceptions to the statement above; but when I was doing all the queen-rearing myself I was impresst over and over with the general truth of it.—EDITOR.]—Gleanings in Bee-Culture.

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 790.]

Mr. W. L. Coggshall, of New York, then read the following paper on

Out-Apiaries for Extracted Honey.

By mistake this paper was announced as relating to comb honey. As a matter of fact I produce but little comb honey, only part of two apiaries being run for it. My opinion is that to produce comb honey to the best advantage it is necessary to see the bees oftener than I can see my out-apiaries.

My first out-apiary was establisht in 1878. Now I have 14 ranging from one-half mile to 20 miles from home, the average distance being 10 miles.

This season my help consisted of Harry Howe, when he was not looking after his own bees, Harry Bever, and one man during the extracting season only, with my own two boys, 12 and 15 years old.

My loss was rather heavy last winter, which leaves me about 1,300 colonies in the 14 apiaries. These apiaries are scattered irregularly around, south, east and west of home; my brother with his 600 colonies and several smaller lots occupying the remaining territory.

My apiaries are located with more regard to pasturage from buckwheat than from any other consideration.

My system of operation is to make just as few motions as possible; to do just as little teaming as possible; in short, to have as little friction as possible. Each operation has been studied carefully to see how to do it with the least motions, while the existing conditions of each location have been workt out with equal care to reduce the work to the lowest limit consistent with the best results. Nothing is done for the looks of it, or because others do it that way. Utility not looks, honey not fun, results not theory, is the plan. It takes time to have the hives in straight rows, and the bees gather no more honey in that way. It takes money to have the latest thing in hives and fixtures, and there is nothing but satisfaction to be gotten out of them.

The extracting season is not the time that the work is done that secures the results. That is only the harvest; the time to begin to prepare for a crop is at the last emptying in the fall, when one must see that there are plenty of stores to last until honey comes again. Then careful packing, and all that is implied in the wintering problem, comes in.

The amount of bees and their distance from home com-

pels outdoor wintering. Then the spring work, making increase, keeping down the swarming-fever, all require careful treatment.

The honey crop is gathered first. It is for this work that it is necessary to employ skilled and experienced help. Almost any one can work the extractor; not at record speed, perhaps, but fast enough; while only an experienced man can tell at a glance what to do with a case of swarming-fever, or, in fact, even to recognize the symptoms.

Speaking of help, I have about stopt employing local help. No sooner do such get to be good for something than they start in the bee-business for themselves, and my territory is already badly overstockt, there being about 2,000 colonies of bees in the Fall Creek valley, where my best apiaries are located.

Now as to management: In the spring I usually go around and clean out the hive-entrances and take out dead colonies. The entrances are contracted to one inch at this time; this is usually about the time of the first flight in the spring.

Then about May 1 I go around and put out a little honey from the dead colonies to one side of the apiary. The next visit would be to put out the bees about the last of fruit-bloom. At this time the bur-combs are scraped off the top-bars and enameled cloth put on in place of the carpets.

About ten days later start queen-cells for increase. The nuclei which are made at this time are each supplied with a capt queen-cell. From this time on I visit the bees every 8 or 10 days to give the nuclei brood from strong colonies, until the increase is in good condition for the white honey harvest, which begins with us about July 4, and lasts two weeks.

Buckwheat commences to yield about Aug. 5, and lasts until Sept. 1.

The extracting-combs are then stored in the honey-house and spaced loosely, so that the bees can get in to clean them out.

I begin to pack the bees about Oct. 1. It usually takes two men 10 or 12 days to put up the 1,300 colonies. My bees are all packt in sawdust, and about 700 are in sawdust packing or chaff hives.

Each apiary has a bee-house 12x16 feet, extractor and smoker, store-combs for honey, hives—in fact, everything that is needed in any apiary, even to matches.

W. L. COGGSHALL.

Mr. Selser—I would like to ask Mr. Coggshall if he winters his bees outdoors.

Mr. Coggshall—Always.

Mr. Selser—What do you do when snow is 10 feet high?

Mr. Coggshall—The bees are all right.

Dr. Mason—Does the color of combs have any influence on the color of honey?

Answer by some one—I don't see any difference I have combs that I have used several years for extracting.

Pres. Whitcomb—Doctor, do you wish to establish that wax is soluble in water?

Dr. Mason—I am not trying to establish anything; I am trying to learn something. I have been so convinced the past season that the color of the comb does have something to do with the color of honey, that I think I shall use only such combs in the future for producing extracted honey as have not had brood reared in them.

Pres. Whitcomb—Mr. Coggshall, how do you clean out the combs after you get thru extracting?

Mr. Coggshall—Let the bees do the cleaning. I generally come away. [Laughter.]

Pres. Whitcomb—Is it not a better time to go visiting than to receive visitors?

Mr. Hershiser—I understand that you lost bees last winter. Last winter I had bees under snow-drifts. In another place I had 50 colonies. My experience is that snow-drifts, if too deep, are destructive.

Mr. Coggshall—They cannot get a cleansing flight when covered with snow.

Mr. Hershiser—There is a difference in colonies. I had some in Chautauqua hives, and I packt them in sawdust, packt them in so I knew they would winter, but they didn't.

D. H. Coggshall—I had colonies in two-story hives, one below and one above. Those were what I lost. The others went thru all right.

J. H. M. Cook—In small hives will there not be some nuclei?

Dr. Mason—Not necessarily.

Mr. Cook—How late will bees lay in the fall?

Mr. Coggshall—They are laying now. [Sept. 7.]

Mr. Cook—But how late will they lay?

Mr. Coggshall—After September.

Dr. Mason—We have got into this matter of wintering. Last winter my bees were well supplied with what I thought was a poor grade of honey-dew, and I was afraid of heavy loss in wintering, but I never had better success.

Mr. Coggshall—Did they have cleansing flights?

Dr. Mason—No; they wintered in the cellar.

D. H. Coggshall—I had old combs. One man who workt for me thinks just as Dr. Mason does, that old combs color honey, but I never saw any trouble.

Dr. Mason—My experience is that where honey is extracted from combs where brood has been reared several or many times, the honey will be slightly colored.

A sample of honey was shown by Dr. Mason.

Mr. Stone—I had an experience that proved to my satisfaction that dust will discolor honey.

Dr. Mason—Our dust is light-colored.

Mr. Stone—Can you tell by the color about honey-dew?

Dr. Mason—No; for sometimes honey-dew is of a light color and of rather pleasant flavor; at other times it has a very dark color, and of such bad flavor that no one can eat it.

HONEY FROM SWEET CLOVER.

Some extracted sweet clover honey was on exhibition by Dr. Mason, and Pres. Whitcomb said, "I would like to wager my reputation as a bee-keeper that that honey is 40 percent white clover."

Dr. Mason—I won't bet with you for so small a wager. That sample is almost pure sweet clover honey.

Mr. Abbott—There is not any clear sweet clover honey gathered in Nebraska, and that is why Mr. Whitcomb has never seen it.

Dr. Mason—I have sweet clover honey at home that is just as clear and nice as any honey can be, and I have another like this sample that is a little colored by a mixture of dark honey.

Mr. Selser—I would like to substantiate the president's statement that there is 40 percent of someting else in that honey. I have tasted the honey. I have written an article and sent it to the bee-papers about it, and that was the last I have heard of it. I think sweet clover is a curse. I have written to all the farmers and told them to root it up.

Mr. Abbott—Why is it a curse?

Mr. Selser—Because the honey is enough to make a dog sick.

Mr. Abbott—You mean it makes *you* sick.

Dr. Mason—I don't care what Mr. Selser thinks, any more than he cares what *I* think. I *know* that sweet clover honey is a first-class honey, if properly ripened. I am a judge of sweet clover honey; my bees are within reach of acres and acres of sweet clover, and I get more honey from it than from all other sources put together, but enough dark honey is sometimes gathered at the same time to color it. I know enough about sweet clover to know it is *not* a curse, either for honey or by the roadside. It is a blessing to the farmer.

Mr. Abbott—I can go to any market in the United States and get as much for sweet clover honey as for any kind.

Mr. Selser—Not in Philadelphia.

Mr. Abbott—Yes, sir, in Philadelphia and New York. The trouble with me is that I don't get enough of it.

Dr. Mason—Just a few days ago a lady friend was at our house to dinner. We hardly ever put comb honey on the table, but seldom have a meal without having extracted honey, but that day we had a section of pure sweet clover honey on the table, and she said it was as nice honey as she had ever eaten, and we all said it was nice.

Mr. Selser—What I said was a little strong, for I wanted to get up a discussion; but to me it is "off." It is a delicate grade of honey. There is a class of people that cannot eat anything strong, and they will throw it back again. If there is any strong taste they will throw it back to me. Sweet clover has been a curse to me, and I have tried to have it pulled up.

Dr. Mason—Were you speaking of extracted honey or comb honey?

Mr. Selser—Extracted.

Dr. Mason—It probably was not ripe, and when unripened it has a strange, green, unpleasant flavor, and that is probably the kind Mr. Selser has been getting, and when in that condition it is not fit to eat.

The convention then adjourned until 7:30 p.m.

Concluded next week.)

"Honey Calendar" in place of the Almanac—See p. 807.

THE AFTERTHOUGHT

The "Old Reliable" seen thru New and Unreliable Glasses.
By E. E. HASTY, Richards, Ohio.

STOP EXTRACTING UNCAPT HONEY.

No doubt there is *some* uncapt honey that is sound and will keep—and certainly there is some capt honey that will ferment and spoil—but not enough in volume of either kind that it ought to prevent a pretty strict enforcement of the general rules. The man who says some unsealed honey is ripe is simply pushing a special plea to excuse himself in doing wrong. Some farmers are willing to have their hickory-nuts taken without asking. Some ladies do not object to having tobacco-smoke drifted in their faces. Some individuals will not take a contagious disease, no matter how carelessly the germs are scattered around. The point is, that decent and well-meaning people do not act upon these exceptional cases, but upon the general rules. And the general rule is (and this general is a senior Major General, too) that uncapt honey is not fit to put on the market. Immense damage is done the honey market, and great wrong is done the honest producer, by those who cheaply produce tons of half-ripened stuff not fit to be sold at all. They want the price set by the man who put in the work necessary to produce a good article, and then they want to float their article off without putting in the work. By the way, is there any one who will *knowingly* buy a barrel of this unripe stuff *except the man who intends to mix two-thirds glucose with it*, and so make it keep? The convention, as reported on page 709, did something in the way of rebuking this evil, but they were not half hot enough.

GETTING THE AMOUNT OF WINTER STORES.

Mr. Doolittle, in his excellent wintering article, page 709, gets after one plan with a sharp stick, which rather seems to me to be good enough—the plan, not the stick—no, plan good enough, and stick too good. This refers to the plan of weighing each hive in the gross, first knowing what the weight of empty hive, combs and bees ought to be. Is there much more danger of figuring wrongly by this plan than there is of guessing too large by the plan which he recommends? Anent the matter of how much winter stores is really on hand, I think a great lot of bee-folks say, "My bees have 20 pounds" (or more) when really they have only 14. In fact, an 8-frame brood-nest containing 14 pounds of actual honey looks pretty well filled. Frames in the brood-chamber don't hold like those in the super; and empty combs from the super don't weigh like those from the brood-chamber.

DROWNING WAX-WORMS IN COMBS.

Wax-worms, when they get big, are very hard to kill by the ordinary method. For a small number of combs I judge that Mr. Glasspole's method, given on page 714, would be excellent. Drown them—drown them thoroly, till they are dead, dead, dead. Then throw out the water with the extractor, and dry the combs in warm air. Who knows how long combs can be kept full of water without damage, as a preventive against eggs hatching?

THAT CELLULOID VEIL.

Rambler's celluloid veil (page 715)—well, I opine it will have quite a tussle of it to get general recognition and currency. Nevertheless, perhaps it may have a legitimate place.

SEXTUPLETS—A "NO NONSENSE" APIARY.

Do they have sextuplets in place of twins in old Clearfield County? Looks like it in that apiary picture on page 721. Perhaps the arrangement and a slight lack of clearness in the half-tone is responsible for that impression. And the apiary? Why, that seems to be the ordinary apiary of the "no nonsense" sort—unless you call comfortable shade for the heated bee-man to work in, a variety of "nonsense."

SOME ENDURING POETRY.

Almost afraid I shall not do justice to Mr. Secor's poem, page 722. It is a good one. As a poet he knows unusually well how to avoid the two opposite evils of too much dignity and too little dignity in a paper of this kind. (Coals of fire on his head, for putting us critics among the humbugs.) And some of his couplets have a force and inclination to stick which seem to speak of permanence—*e. g.*:

> "With a silvery tongue which for smoothness
> Beats lightning and tallow combined."

Or this one—

> "Would you get the most eggs from a turkey,
> Just humor her whims, in the main."

BAD BUSINESS GROUNDWORK—PORTO RICAN HONEY.

What a sad sentence is that of W. A. Selser, on page 724: "Misrepresentation and falsehood are the groundwork upon which a large percentage of salesmen try to build up their business." And the pity of it is that no man can deny it. If it were only untrue how pleasant it would be for a critic to cuff his ears.

Mr. Selser gives a portentous fact where he tells us that Porto Rico is already shipping us honey, and that the bakers have already found out that it decidedly excels all American extracted in power to keep a cake moist. Now I have a sneaking suspicion that all there is to that alleged fact is that the Porto Rican producer *cannot* (owing to the tropical climate) extract his honey unripe, and get it to the United States market without having it spoil on his hands. If that's it, it may be decidedly a blessing in disguise to us to have some of our heavy fellows rudely kickt out of their bad habits by competition from our new island.

THAT NEW "NEW YORK BEE-DISEASE."

And so it is the *New York* bee-disease that we are to make room for next. Can hardly say, "Thanks," or even "Thanks awfully." The genesis of new diseases, affecting man and beast and plant and insect, is one of the wonderful things of this wonderful universe we live in. These troublesome novelties seem to come around very much more frequently than they used to. It is even soberly suggested that germs come to us as dust from the planetary spaces which develop on reaching earth, and go into business each according to his kind. On the whole, I'd sooner lay it to the *transportation* of germs from one part of the world to another—said transportation stirring up variation, and variation enabling them to take a new habitat, and open up a new business—to-wit, a new disease. Dr. Howard is good authority; and if he says the new mephitis the York-Staters have under the floor of their back shed is not pickled-brood, probably it's so. Page 732.

SOMETHING FOR QUEEN-BREEDERS.

An enormous bug in the ear, W. C. Gathright proceeds to give the queen-breeders, page 731. I'm not a queen-breeder, and not qualified to pronounce judgment, but if it is true that bees always remove all the royal jelly given to selected larvæ, the professionals ought to have found it out long ago. If the bees do this they most likely do it *roughly*, doing the tender queen-elect no particular good in the process.

CHEAP GERMAN BEES AND QUEENS.

Those mentioned on page 730 are not so very far away from what we would be willing to duplicate, after all. The time of the year, and the hit-or-miss kind of stock that they are, are facts to be considered. Fall swarms, such as would require three united to be first-class for wintering, are not so very cheap at 63 cents (no combs or stores probably), and the two extra queens, which we usually waste, can be found and caged for 25 cents each.

CARLOAD OF HONEY AT 27 CENTS A POUND.

A carload of honey sold in Chicago for 27 cents a pound wholesale! Suited to make a fellow feel like Virgil's hungry wolf listening to the bleat of lambs. And it was only a matter of 26 years ago. Page 726.

WHY DIFFERENCE IN GOOD COLONIES?

Dr. Miller, having but one question to answer, page 727, gives us an excellent and pretty exhaustive view of the reasons why one colony gives surplus and another none—to the puzzlement of the beginner. In my apiary I pretty nearly always assume that a swarm escaped when I didn't see them, if a colony fails to store when other similar ones give surplus.

RAINY OCTOBER IN CALIFORNIA.

Perhaps my nose for superlatives is longer than it ought to be—at any rate I see with interest that California has just had the rainiest October of its history. Not very common to have *any* rain in October, I take it. Page 729.

CONDUCTED BY

DR. C. C. MILLER, Marengo, Ill.

White Coating on Comb Honey.

I have been keeping bees for two years, and have lots to learn yet. I notice now that my comb honey has a white coating on the surface, that is, on the capping. Is it mold or anything that would be injurious to the health of one eating it? PENNSYLVANIA.

ANSWER.—I'm in the same boat with you in having lots to learn yet, and I suspect we'll keep company for some years to come. But I've learned not to have any fear of that whitish substance that comes upon the surface of comb honey. It looks a little like mold, and possibly is somewhat in that line, but it doesn't seem to affect the taste, and I never knew it to hurt the honey for the use of either man or bee.

Management of Swarms.

I practice natural swarming, hiving the swarm back on the old stand, moving the parent colony to a new location, and sometimes give the swarm part of the brood from the parent colony, sometimes not. The reason for giving part of the brood is to keep the colony strong until they have time to rear field-workers. Do you think giving part of the brood is a good plan? What age brood, and how much, would you use? KANSAS.

ANSWER.—Now look here, don't you think it's a little rough in you to ask me how a thing will turn out in which you have had direct experience yourself? Instead of your asking me, I ought to ask you about it, for you've had more experience than I in that line. Practice is better than theory, and my opinion would be largely theoretical. But if you'll promise to tell how you come out, I'll agree to do my best at theorizing. You promise, do you? All right, then here's what I think:

In this region, and in any region where the bulk of the surplus is gained in a comparatively short time somewhat early in the season, a colony that will be content to store honey without ever thinking of swarming at all is the one that gives the best yields. Swarming divides the forces, and that is just the thing we don't want. When a colony swarms, if you give it back all its brood, that will leave it stronger for the future than if you give it no brood. But if you give back its brood it will keep on swarming, so that will not do. The question is, how much can you give back without having it swarm? Perhaps you can tell something about that from your past experience. Try two or three frames, and if they don't offer to swarm you can try more with the next swarm. Take off queen-cells from the frames you give. The older the brood the sooner the help gained, so it will be well to give combs consisting as much as possible of sealed brood. In actual practice this may not turn out to be as good as it looks on paper, so watch closely and report results.

About Wintering Bees.

I have had bees for 4 years, and have not been successful with them. When I examine them in the spring, the comb is moldy at the bottom, and has lots of dead bees. It takes them till about July 1 to recruit up again. I put into winter quarters last fall 29 colonies, and came out with 28 in the spring, and there were so few bees that they dwindled down to almost nothing in the spring, which caused me to double up all I could, and left me, with the increase, only 26 colonies at this time, and they are good and strong, with plenty of stores.

I go a good deal by the bee-books and bee-papers, and my own judgment, according to my locality. I wintered them last winter against a hillside, in a shed three sides under the ground. The south side was a double wall with dirt between the walls, and about a foot apart. I kept an oil stove in it the coldest spells, and aimed to keep it at about 45 degrees. My hive bottom-boards were on tight, with the entrance space wide open. My hives are the improved Langstroth with loose bottoms, with an inch block under each corner.

I have changed my house so it is good and dry, and can not freeze, with an underground spout 36 feet long and 6 inches square, with a couple of elbows and a 6-inch pipe overhead, and 18 inches of fine, dry manure mixt with a little dry earth. If I don't have success in wintering this time, I will have to give up, which I don't like to do, as I have many fixtures, and would like to try to make a success of bee-keeping, as I am the only man this side of Fargo that has bees, that I know of now. NORTH DAKOTA.

ANSWER.—Unless there is a chimney of some kind directly over the blaze to carry off the smoke and foul gases, an oil-stove should never be allowed in a place where bees are confined. The impurities contaminating the air may be worse than the cold.

With good stores in a dry place at about 45 degrees, there ought to be no such trouble as you mention, unless the entrances of the hives become clogged, or unless the fumes of the oil-stove make trouble. With an inch block under each corner it seems there ought to be no trouble about clogging, still it may be well to keep the matter in mind and make sure that there is abundant space for the air to get into the hive. One place, however, you say the bottoms were on tight, and it is quite possible the entrances were clogged.

Extractors and Extracting-Frames.

1. Does the Cowan extractor take combs of different sizes?

2. Would you advise using the full-depth Langstroth frames, or the shallow extracting-frames, for extracting?

3. Should the shallow extracting-frame be wired?

SOUTH CAROLINA.

ANSWERS.—1. The Cowan extractor is made with pockets of different sizes: for Langstroth frames, comb-pockets 9⅝ inches; another with pockets for frames not more than 11 inches deep; another for frames not more than 12 inches deep; and another for larger frames. Of course, any of these would take frames of smaller size.

2. The Dadants and others who produce extracted honey in large quantities think it desirable to have shallow frames for extracting. Other advantages more than balance the advantage the larger frames have in being used sometimes in the brood-chamber.

3. They are stronger when wired; an especial advantage while new.

York's Honey Calendar for 1900 is a 16-page pamphlet especially gotten up to create a demand for honey among should-be consumers. The forepart was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample free; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

GEORGE W. YORK, Editor.

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GEN'L MANAGER AND TREASURER—Eugene Secor, Forest City, Iowa.

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NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England: — Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Merriest Christmas of your life we wish to each and every one of our readers—and many returns of the merry day to all.

"**Old Grimes** is dead." So said the old poem, but by referring to page 801 it will be seen that another "Old Grimes" has taken his place. Probably the latter is a son or grandson of the former. But no matter, the present "Old Grimes" is a bee-keeper, and a good one, too. He proposes to tell in ten or more articles "How to Get the Best Out of"—the hive, a colony of bees, an apiary, a smoker, a honey-house, a honey-extractor, a honey-knife, a queen-excluding honey-board, and our helpers.

Possibly there may be more than the ten articles. There are two on "How to Get the Most Out of an Apiary." This series of articles will be worth many times a single year's subscription to the American Bee Journal. The first one of the series, which appears this week, will be followed by the others in regular weekly succession. Don't fail to read them carefully.

Comb Honey in Cold Weather is the heading of a timely item in Gleanings in Bee-Culture, which reads as follows:

"Be sure to warn the groceryman, or any one else who handles your honey, to keep that in the comb, at least, in warm, dry rooms. A room subject to freezing temperature should never be used for the storage of comb honey. Freezing cracks the cappings, and when the room warms up again it will sweat like a pitcher of cold water on a summer's day. Unsealed comb honey receiving such treatment will also be ruined. The 'sweat' will mingle with the honey, thinning it so it will sour. The commission man is supposed to know all this, while your local grocer may be utterly ignorant of it."

As we read the above paragraph we were reminded that several years ago one of our local grocers, in the summertime, told us that the comb honey he had was leaking, or the honey was running out of the comb, terribly. When we askt him where he kept it, he replied, "In the refrigerator, of course, for it would melt if outside, these warm days."

How ignorant grocers are about the goods they handle. And yet, we can hardly blame them much for not knowing better concerning honey. They need to be *told* many things, and will always receive it kindly, when it is done in the right way. Of course, the grocer referred to above never will put honey into a refrigerator again. He knows better now.

Australian Honey-Yields.—The Australasian Bee-Keeper reports that in 1898 Frank Curr's bees began storing in August, and continued seven months until March, 1899 (remember that their summer is at the same time as our winter). He started with 120 colonies, increast to 145, and took 47,000 pounds of honey—nearly 400 pounds per colony.

How Many Hours a Day Do Bees Work?—Perhaps a goodly number would answer, that in a busy season a bee works about 24 hours a day. If Prof. C. F. Hodge has made no mistake in his observations, reported in Gleanings in Bee-Culture, bees—at least some of them—don't even work on the eight-hour system. He markt bees with colors, watcht them from daylight to dark, and says, "No single bee that I watcht ever workt more than 3½ hours a day." In one case he saw a worker crawl into a cell and watcht her remain there lying quietly on her back for nearly five hours, and asks whether she was asleep or resting.

The Honey-Bee in American History.—The earliest mention of honey in America, so far as considerable research discloses to the writer, is in Irving's account of De-Soto's wanderings. While the adventurer was at the village of Ichicha, in June, 1540, his men found a quantity of bears' grease preserved in pods, likewise oil made from the walnut, and a pot of honey. The latter they had not before seen, nor did they ever again meet with it during their wanderings.

Some have inferred from this that the honey-bee was in Florida at this period, and that it was indigenous to America. But this does not follow; first, because the village in which the honey was found was located in the country since known as northern Georgia, or perhaps northern Alabama, and not in Florida; second, the honey mentioned was very possibly the product of the bumble-bee, which was a native, and very widely scattered.

Nevertheless, the honey-bee was probably introduced by the Spanish settlers in Florida at least at a later period, says the Scientific American, for Bartram, who explored the country in 1773, mentions honey and beeswax as articles of barter among the Indians. He speaks of honey in so many places in his book that it must have been quite common, and therefore could not have been the product of the bumble-bee, whose store of honey is very scant. Bartram was told by a physician that there were few or no bees west of the peninsula of Florida, and but one hive in Mobile, which latter had been brought from Europe. Traders had also informed him that there were none in west Florida.

At this period the honey-bee was common all along the eastern shore of the country, from Nova Scotia southward.

The fact that it was not found in the interior is good evidence that the insect was not a native of America. Otherwise, natural swarming would have distributed it thruout the land long before the arrival of the white man.

Jonathan Carver, an Englishman, explored Wisconsin and the adjacent territory in 1766-67, and in his book publisht soon after he mentions the common insects. The honey-bee is not among them, but the bumble-bee is referred to as follows: "The bees of America principally lodge their honey in the earth, to secure it from the ravages of the bears, who are remarkably fond of it."

The honey-bee was first noticed by white men in Kentucky in 1780, in New York in 1793, and west of the Mississippi in 1787.

Again the "Sting-Trowel Theory."—Mr. J. J. Ochsner, of Sauk Co., Wis., when renewing his subscription for 1900, enclosed the following which he clipt from the October number of the Normal Instructor—a teacher's paper publisht in the State of New York:

THE STING IS USEFUL.

What seems to us only harmful and disagreeable may sometimes prove to have uses of which we know nothing.

It will be a surprise to many to learn that, after all, the most important function of the bee's sting is not its stinging. I have long been convinced that the bees put the finishing touches on their cell-work by the dextrous use of their stings; and during this final finishing stage of the process of honey-making the bees inject a minute portion of formic acid into the honey. This is in reality the poison of their sting. This formic acid gives to the honey its peculiar flavor, and also imparts to it its keeping qualities. The sting is really an exquisitely-contrived little trowel, with which the bee finishes off and caps the cells when they are filled brimful with honey. While doing this the formic acid passes from the poison-bag, exudes, drop by drop, from the point of the sting, and the beautiful work is finisht.

May it not be, perhaps, that one of the purposes of life's stings is to give a greater zest and flavor to its honey?

Altho no quotation marks appear in the clipping as it appears in the Normal Instructor, those who are familiar with the literature of a few years ago will recognize the second and larger paragraph as something very like the words of the Rev. W. F. Clarke. Probably no wilder theory as to bees was ever imagined, nor one with less foundation. The only reason for the belief of Mr. Clarke that the sting of the bee was used as a trowel, and that poison was dropt from the bee's sting into the honey, was the one given in the clipping, "I have long been convinced." What convinced him he never divulged. Many a bee-keeper has watcht bees working wax, but no one has ever said he saw the sting used for that purpose. No one ever said he saw poison drop from the sting into the honey. Mr. Clarke never said he had seen such a thing; he only said he was "convinced." It would be to his credit if he should now say he had no foundation for his conviction, seeing that the sting-trowel theory seems again coming to light.

Naptha Beta and Napthaline for Foul Brood.—On page 786 appeared a reply to the following from Mr. Dudley. We should also have publisht at the same time the opinions of Thos. Wm. Cowan, editor of the British Bee Journal, and Hon. R. L. Taylor, both of whom were kind enough to respond to our request, but their replies were overlookt and found too late to appear with Prof. Cook's. Here is Mr. Dudley's question:

EDITOR YORK:—I am very much interested in all you can publish in regard to naptha beta and naphthaline. Do you think if naphthaline were put into hives of healthy colonies in early spring, and kept there during the robbing season, that the germs of foul brood that would be brought from other infected hives would be kept from spreading in the healthy colonies until the bee-keeper would discover it, and have an opportunity to cure it while strong in bees?

If this drug will retard the disease so that it can be discovered and treated while a colony is strong, I can see how it can be of much service to those who produce honey in foul-brood localities.

Salt Lake Co., Utah. GEO. E. DUDLEY.

ANSWER.—During the time that napthaline is in a hive the vapor given off, while not killing the bacilli, arrests their increase of growth; therefore, as suggested, it would prevent the infection from spreading in healthy colonies. It is, however, safer to have a couple of balls of napthaline split in halves in the hives at all times.

Monterey Co., Calif., THOS. WM. COWAN.

ANSWER.—I have never tried the drugs mentioned above, but from considerable experience with the use of salicylic and carbolic acids I should not rely on the plan proposed. Syrup medicated with salicylic acid fed to the bees of any infected colony will prevent the spread of the disease (not cure it) in that colony, as well as to healthy colonies from diseased ones so fed. Possibly the drugs mentioned might do so, too, but as I have tried the other I should prefer that if I were in a case where I wisht to prevent the development of the disease for the time being at every cost, feeding during "the robbing season." But the development of the disease is not usually so rapid that one who is acquainted with its characteristics will not discover it before the colony becomes weak, if he is on the lookout for it, going thru each colony three or four times during the season. R. L. TAYLOR.

Lapeer Co., Mich.

The Weekly Budget

MR. CHAS. DADANT, writing us Dec. 12, reported the illness of his son C. P., who was suffering with bronchitis. We hope he is all right again now.

* * * * *

THE CANADIAN BEE JOURNAL FOR DECEMBER is a pictorial number, containing 16 pictures of leading Canadian bee-keepers, chiefly officers and directors of the Ontario Bee-Keepers' Association. It is very pleasant to look upon the faces of those whose names are familiar to all who read the Canadian Bee Journal.

* * * * *

Mr. T. F. BINGHAM, of Clare Co., Mich., wrote us as follows, Dec. 13:

"Everything looks well for a great honey-year. Today is almost the only freezing daylight we have had. My bees don't know that the wind blew yesterday, or that the air is freezing. No snow."

* * * * *

MR. S. A. NIVER—the New York State bee-keeper and honey-salesman who it was said had a tongue that workt on a central pivot—dropt in very unexpectedly to see us one day last week. He's a "jolly boy," even if he has a daughter somewhere near a quarter of a century of age. By the way, the daughter is to be wedded this very week, we believe. (Congratulations all around.) Mr. Niver lived in Chicago the five years just preceding 1890.

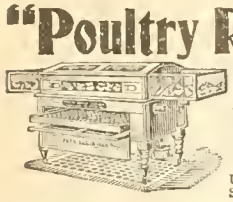
* * * * *

ERNEST WYNNE BOYDEN is the name of the latest arrival among the A. I. Root Co. Master Ernest Wynne was born to Mr. and Mrs. A. L. Boyden, Nov. 2, 1899. Editor Hutchinson, when announcing the event, said:

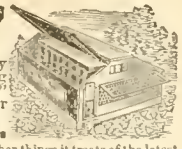
"Mr. Boyden is the Michigan young man who went down to Medina a few years ago, became one of the business managers for the A. I. Root Co., won the heart and hand of Constance Root, or 'Blue Eyes,' as Mr. Root used to call her, has since become one of the partners in the company—and now has a boy, as well as the rest of them."

We extend our congratulations to Mr. and Mrs. Boyden, as well as to all the rest of the "Rootvillians," upon the arrival of "Ernest No. 2." May he emulate the "E(a)rnestness" and other virtues of his honored uncle.

The Premiums offered on page 814 are well worth working for. Look at them.



"Poultry Raising on the Farm"



"Poultry and Incubators on the Farm," "Feeding Specially for Eggs," "Raising Broilers for Market," Successful Egg Farming," "Capons for Profit," "The Pekin Duck Industry," &c., are a few of the many good things contained in our

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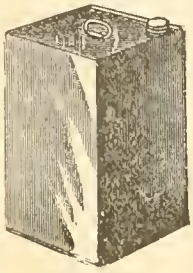

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We have been able to secure a quantity of **White Alfalfa Extracted Honey** which we offer for the present at these prices, on board cars here in Chicago: Sample by mail, 10 cents; two 60-pound cans, in a box, 9½ cents a pound; four or more cans, 9 cents a pound. **Cash with order** in all cases.

Owing to our limited supply of this fine honey, those desiring it should order promptly. Address,

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The representative modern Farm Paper of the Central and Southern Mississippi Valley. Page departments to every branch of Farming and Stock-Raising. Plain and Practical—Seasonable and Sensible. Send 25 cents, silver or two-cent stamps, and a list of your neighbors (for free samples), and we will enter your name for 1 year. (If you have not received your money's worth at end of year, we will, upon request, continue the paper to you free of cost another year).

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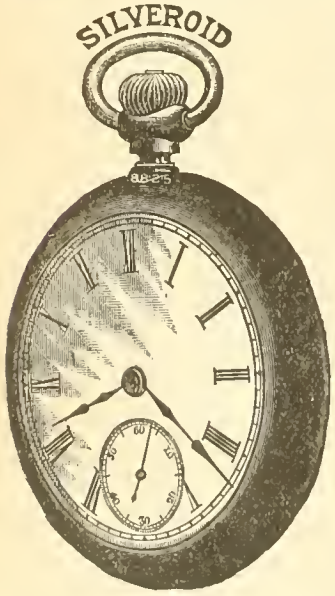
prepares it just right. It cuts fast, fine and turns easy. Many sizes to suit everybody. **CLOVER CUTTERS** that are not mere toys but will cut. Also Grit, Feed Trays, &c. Send for **FREE** catalogue. F. W. MANN CO., Box 77. Milford, Mass.



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Queen-Cells Between Sealed Brood are better cared for than between two combs of unsealed brood, and more bees are found clustered over sealed than unsealed brood.—Bee-Keepers' Review.

Doolittle's Division-Board Feeder is enthusiastically endorst for stimulative feeding by the two leading bee-keepers where Gleanings in Bee-Culture is manufactured. Simple to use, gets the heat of the cluster so that bees will use it any time, and its use does not start robbing.

Losing Queens in Supers.—Wm. Muth-Rasmussen, in Gleanings in Bee-Culture, says that altho he finds no brood in his sections it is not uncommon to find a queen in the supers. As a result, when a super is taken from a hive there is danger that a queen may be lost. So when he removes a super he tacks on it a piece af section with the number of the colony on it. If he finds a queen in the super, the number tells him where to return the queen.

Golden and Five-Banded Bees.—G. M. Doolittle says in Gleanings in Bee-Culture that some of the very yellow bees in this country are of Cyprian origin, but nearly all the very yellow bees of Italian blood came originally from Joseph M. Brooks, of Indiana. By some the word "golden" is applied to bees a little yellower than the five-banded, but the two terms "golden" and "five-banded" are in general used indiscriminately. Altho Mr. Doolittle does not say so, he has probably done more than anyone else to disseminate a strain of golden Italians combining beauty with other good qualities.

Wax-Worms Eating Dried Apples.—The report of the Secretary of Agriculture, Western Australia, includes a report from the biologist, R. Helms, says the Australian Bee-Bulletin. "Mr. Helms' report speaks of the increasing number of wax-moths in apiaries where bees are kept in unsuitable boxes. Speaking of the small wax-moth, he says 'It does not entirely depend upon wax-comb for its propagation, which, however, it prefers to anything else. Its larvæ can also develop upon dried fruits and milling refuse. Dried apples are also invaded by these larvæ.' Foul brood is very common in Western Australia. Bee-paralysis is also met with."

To Prevent Bees Gnawing Quilts.—A writer in Gleanings in Bee-Culture says:

"For years past I have used waxt cloths over brood-frames. The bees propolize the spaces between the frames quite liberally, and ofttimes manage to insert a good deal of the stuff between the cloth and the top-bars. Once in a while I remove the cloths and run a hot laundry-iron over them, thus diffusing the propolis over and thru them. Prior to this operation the bees are somewhat disposed to gnaw the cloth, but never after. Now, I have a number of these cloths that have been in use several years. They are as dark or black as any brood-comb I ever saw."

Introducing Queens by Caging Against the Side of a Comb was recommended by Editor Hutchinson. R. A. Lapsley complained in Gleanings in Bee-Culture that the plan had failed with him. Mr. Hutchinson says in the Bee-Keepers' Review that he sent out several hundred queens with instruction for that sort of introduction, and almost without exception the failures were like that of Mr.

Root's Column

Reading for 1900.

This is the time of year when bee-keepers select their reading for another year. **The A B C of Bee-Culture** will furnish you profitable and interesting reading for a long time. It tells all about the management of the apiary thruout the year, the methods pursued by leading bee-keepers, and the different hives in use. Better send for the book at once. If you wish, we will send you sample pages.

Sold by all dealers in bee-keepers' supplies, or sent by the publishers for $1.20, postpaid. We will furnish you Gleanings in Bee-Culture one year with the book for $1.75, postpaid.

By the way, Gleanings in Bee-Culture has 950 pages in a year, and has averaged this for the past 10 years, yet the price is only $1.00 a year. If you have not seen a copy lately, send for our December 15th issue which contains the **PRIZE PICTURES**, as well as the photographs of Editors York and Hutchinson. This contains our annual index which will show you the scope of Gleanings articles during the year. It also contains the index of contributors and the illustrations of the year. That the index might not crowd our reading-matter we give 16 pages extra. In this issue we give an illustration and description of the **DANZENBAKER HIVE** for 1900.

If you want a copy of this issue you must ask for it at once, as we have only a few to spare.

Clubbing Rates.

As an inducement for our subscribers to renew before the expiration of their present subscription, which saves us considerable time, we offer the following rates for Gleanings one year and a year's subscription to any of the following papers at prices mentioned.

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THE A. I. ROOT CO.
MEDINA, OHIO.

Lapsley—the bees dug under and liberated the queen before they were ready to accept her. The trouble was just the one complained of by Mr. Lapsley, sufficiently explicit instructions had not been given, Mr. Hutchinson never thinking that any one would cage the queen against a *new* comb of *honey*. He says: "The comb selected should be old, tough brood-comb, and filled with just-hatching brood instead of sealed honey. If a few of the cells contain unsealed honey, no harm is done—in fact, it seems to me better." And the bee-keeper must not stir things up by looking in a day or two to see if the queen is "all right."

Grumbling at Low Honey-Prices seems to be as common in Australia as in this country. A writer in the Australian Bee-Bulletin says:

"I can't for the life of me see how prices are going to rise without one-half of the bee-keepers go out of the business. The best thing in connection with the honey-business is the supply-trade, viz., hives and fixings, and queen-rearing. Goodness knows, hives and fixiugs are cheap enough, but even at the low price they are at it scarcely pays to buy them. I don't know any business more unsatisfactory to dispose of than bees and hives. One simply cannot sell a well-appointed apiary at any price."

Do Porter Escapes Make Bees Bite Cappings?—Editor Hutchinson, in the Bee-Keepers' Review, defends them against the accusations of F. Greiner. Mr. Greiner is right in saying bees will bite the cappings if much smoke is used or if they are greatly alarmed. But Mr. Hutchinson thinks there is no need of that with the escapes. After the flow is over, he chooses the middle of a warm afternoon to put the escapes in place, doing the work gently, and has no trouble. It is just possible that the two gentleman may find a difference on account of difference in bees. The blacks are more easily frightened so as to gnaw cappings than are Italians.

Gentle Bees That Are Hustlers.—The editor of Gleanings in Bee-Culture intimated that "cross and snappy" bees were likely to be the kind to roll in the honey. Whereupon D. B. Lynch reports a colony of hustlers that are remarkable for their gentle disposition. He says:

"No one has ever been stung by her bees, and the hive has been opened repeatedly in wind (do you know what Dakota wind is?) without smoke or veil. I send you a photo of my little daughter, two years and nine months old, with a frame of them. Notice the bee on her forehead. She knows they will not hurt her. She has often been stung, but not by that colony; and if any one has 'cross and snappy' bees that can beat them hustling, please quote prices. I am open to conviction."

The New York Honey Market.—Mr. Segelken says in the Bee-Keepers' Review and Gleanings in Bee-Culture that he is quoted as saying that the New York market finds no trouble in disposing of 60,000,000 pounds of honey annually. While he admits that New York is the great honey market of the country, yet he says no such amount could be handled in any one year—not by one firm nor by half a dozen. He says he may have said that 6,000,000 pounds was the amount, and this would come nearer to the actual amount sold; but this would include only all domestic honey, not counting the large consignments of foreign honey that come thru that port. All told, he estimates that the New York market handles from 7,000,000 to 8,000,000 pounds of honey annually.—Gleanings in Bee-Culture.

Feeding Substitutes for Pollen.—In most places bees can get pollen from natural sources in spring; but sometimes, and in some places, it is a scarce article, and then, according to G. M. Doolittle, the

Yellow Sweet Clover Seed

WE HAVE IT AT LAST!

We have finally succeeded in getting a SMALL quantity of the seed of the YELLOW variety of sweet clover. This kind blooms from two to four weeks earlier than the common or white variety of sweet clover. It also grows much shorter, only about two feet in hight. It is as much visited by the bees as the white, and usually comes into bloom ahead of white clover and basswood. We offer the seed as a premium

A QUARTER POUND FOR SENDING ONE NEW SUBSCRIPTION.

So long as it lasts, we will mail a quarter pound of the seed to a regular paid-up subscriber who sends us ONE NEW subscriber for the American Bee Journal for 1900, with $1.00. We will also "throw in" the balance of 1899 to such new subscriber. Surely, this is a great offer. We have been trying for years to secure this seed, and finally succeeded in getting it. It is new seed, gathered this season by an old personal friend of ours, so we know it is all right. But we have only a small supply. When nearly out we will mention it.

GEORGE W. YORK & CO.
118 Michigan Street, - CHICAGO, ILL.

SAVE FEED.

Feed is fuel to the animal economy. It is burned up to supply internal heat. If it is heated (cooked) before it goes into the animal's stomach it saves that much fuel (feed).

Electric Feed Cookers

save feed, save money and produce better results. Made of best cast iron with steel linings; boiler made of extra heavy galvanized steel. Capacity 25 to 100 gallons. Circular and price free.

Electric Wheel Co., Box 16, Quincy, Ill.

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Before placing your order, to send me a list of what you need in

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And other Supplies, and get my prices. You will get the best goods and save money. Illustrated Catalog Free. BEESWAX WANTED.

GUS DITTMER, Augusta, Wis

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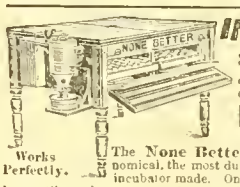

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(A heavier and stronger knife than the one we offered heretofore.)

(THIS CUT IS THE FULL SIZE OF THE KNIFE.)

Your Name on the Knife.—When ordering, be sure to say just what name and address you wish put on the Knife.

The Novelty Knife is indeed a novelty. The novelty lies in the handle. It is made beautifully of indestructible celluloid, which is as transparent as glass. Underneath the celluloid, on one side of the handle is placed the name and residence of the Subscriber.

The Material entering into this celebrated knife is of the very best quality; the blades are hand-forged out of the very finest English razor-steel, and we warrant every blade. The bolsters are made of German silver, and will never rust or corrode. The rivets are hardened German silver wire; the linings are plate brass; the back springs of Sheffield spring-steel, and the finish of the handle as described above. It will last a lifetime, with proper usage.

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The accompanying cut gives a faint idea, but cannot fully convey an exact representation of this beautiful knife, as the "Novelty" must be seen to be appreciated.

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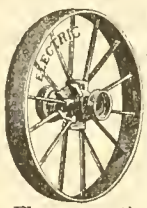

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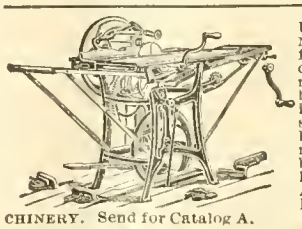

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bee-keeper can get a lot of fun to the square inch by feeding a substitute. He says in the Progressive Bee-Keeper:

"I had such a season once, and the bees and I improved it by my making a shallow box about 10 feet long and 4 feet wide, placing the same in a sheltered sunny nook, and pouring into it some very finely ground 'horse feed' (corn and oats ground together), together with some very fine planer shavings, and about half as much fine wheat flour as there was of the horse feed. A little piece of comb and some scraps of propolis were put on some live coals, and the dish containing both set in the center of the shallow box, with a few drops of honey scattered about over the contents. An hour later that 'sunny nook' was a sight to behold, and one of the most merry, pleasant things I ever was allowed to hear and see. The air was full of dusty white bees just above the box, packing the contents from the box in their pollen-baskets, while twice as many more were rolling about amongst the bits of shavings, oat-hulls, etc., in such a way that no one could look on the sight without having every bit of 'blues' they had ever experienced driven from them. Nothing in the bee-line ever attracted visitors as did this, and the children just went wild with glee and delight while watching the bees 'cut up their antics' in and over that box of feed."

GENERAL ITEMS

First Season Fairly Successful.

The past season was my first in the bee-business, and I think I was fairly successful. I purchast four colonies in 8-frame dovetailed hives, and have increast to nine, which are in fair condition for wintering, and also secured 215 pounds of comb and extracted honey. There was a fair honey-flow from June 15 till July 15, from white clover and basswood, tho but very little late honey. A. A. FERRIER.

Ontario, Canada, Dec. 4.

Small Crop But Good Prices.

My report for 1899 is as follows: 22 colonies, spring count, increast to 33, and got about 600 pounds of comb honey. I can't complain, considering the year, which was too cold and wet in the spring. I sold my white honey for 16 and 18 cents, and the dark for 14 cents a pound. Small crop, but got good prices, which generally are about 12 cents for white, and 10 for dark.

H. W. SAVAGE.

Sauk Co., Wis., Dec. 11.

This Winter Can't be the Worst.

A good flight of bees Dec. 10, with mostly mild weather to date, seems to shorten the season so that the winter cannot well be one of the worst ones now. E. E. HASTY.

Lucas Co., Ohio, Dec. 12.

Euphorbia—Probably Not New.

A correspondent of the valuable Bee Journal asks information about a species of euphorbia that he thinks secretes a large amount of nectar. It is a little uncertain to which species of Euphorbia Mr. Livingston refers, as the eminent botanist, Dr. Gray, describes 23 species in the United States; while Prof. Wood, in his botany, describes 27 species. Mr. Livingston says the species that furnishes nectar freely has no petals, but the leaves (meaning probably what botanists call a corolla-like involucre) are either entirely or partly colored a bright red. Now, I find only one species of euphorbia described by Dr. Gray that has a colored, leafy involucre; this is named hypercifolia. Dr. Gray says that

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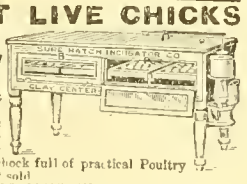

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this species has the appendages of the involucre entire either large and white, or smaller and sometimes red.

If I am right in supposing that Mr. Livingston's plant is the same as the sort described by Dr. Gray, that has sometimes a colored involucre, the other variety having a white involucre should secrete as much nectar as the red, and doubtless does in Georgia and Florida; but both sorts may secrete no nectar in the Northern States. Indeed, the white variety is quite common in this State, but I have never known the bees to resort to it for stores.

Inference: Not best for bee-keepers to invest much for seed of E. hypercifolia.

Cook Co., Ill. D. S. HEFFRON.

No Honey the Past Season.

Most of my bees froze last winter, but I have at present 14 colonies in pretty good shape. There was no honey here the last season.

The American Bee Journal is always a welcome visitor; I drop all the rest till I have read it. GEORGE W. SHEARER.

Stark Co., Ohio, Dec. 11.

Promises Well for Next Season.

There was no honey shipt from this place this year. The loss of bees is variously estimated from 35 to 50 percent for this county. I lost 51 out of 184 colonies, mostly from becoming queenless during our long, dry summer, but everything promises well for next year. We are having plenty of rain. J. A. GERELDS.

Uvalde Co., Tex., Dec. 9.

Two Good Honey Seasons.

We had a good honey season last year and also this year. I secured 3,200 pounds of comb honey. I put my bees into the cellar Dec. 4, the temperature being 46 degrees till last Friday, and since then it is 50 degrees; but last night the wind changed to the north, and we have rain this morning, but I think it will soon change to snow. WM. DUESCHER.

Brown Co., Wis., Dec. 11.

Prospects Good for Next Year.

We are having two spring seasons here in California for 1899. The whole country is rich in verdure, and the weather all that could be askt for in May. No frost yet this winter, and promises are full for a great yield of honey next spring and summer.

A. B. SHEARER.

San Luis Obispo Co., Calif., Nov. 28.

"Several" Kinds of Euphorbia.

On page 766 is a short letter about "Euphorbia—Is It a New Plant?" The description is not sufficient for anyone to identify the plant mentioned by Mr. Livingston as euphorbia, as it is one out of 600 species, some very common and others confined to tropical regions. Some are very poisonous, and many have a milky juice. Could Mr. Livingston give a fuller description of the plant, or give the specific name?

Two euphorbias grow wild here, and there are several species cultivated in gardens. THOS. WM. COWAN.

Monterey Co., Calif., Dec. 4.

Why We Blush—Fair Honey Crop.

MR. EDITOR:—I appreciate your enterprise and backbone in making and keeping the American Bee Journal strictly a bee-keeper's paper, with no *filling* except the kind that fills every reader with information that makes them better calculated to make their profession a success. Those convention talks and papers are all right. Stay with them.

Honey in this locality was a fair crop and of good quality. I bought and shipt east about 25 tons, and the returns were very satisfactory, and the purchasers well

satisfied with the goods. I have been buying and shipping honey for several years, and in the past I have had trouble to get the producers to put up their goods in marketable condition. They are improving, and I have hopes that the standard will be raised so that every bee-keeper will put up his goods so that the whole case will compare favorably with the row behind the glass, and honesty prevail among packers. N. J. COOLEY.

Inyo Co., Calif., Nov. 30.

Rain Means Honey in 1900.

We have had 15 to 20 inches of rainfall to date this winter. This means honey in 1900. We have just placed 550 colonies and 200 nuclei in winter quarters—all strong and heavy with honey.

O. P. HYDE & SON.

Williamson Co., Tex., Dec. 11.

A Fair Season.

The season has been fair here. I took, from 40 colonies, spring count, 1,300 pounds of comb honey and 1,000 pounds of extracted, with an increase of 36, and 200 extracting-combs built.

JAS. R. CONKLIN.

Cayuga Co., N. Y., Dec. 7.

Wintering Bees in the Cellar.

I think it will be unnecessary to refer to any particular place for the statement that it will not do at all to winter bees in the cellar with bottom-boards on the hives, unless there is a wide, deep entrance, for it is repeated in some form or other so often that it seems out of reason for anyone to doubt it. But I wish to say, in as few words as possible, how I winter my bees, which will show that conditions are not the same everywhere.

My hive-bottoms are all nailed on, and are never taken off. The entrance is one-half inch by the full width of the hive. There is nothing over the bees except a board cover when they are taken into the cellar, and that stuck on tight.

I have wintered my bees in the house-cellar since 1893, and have wintered over 100 colonies the last three winters without the loss of a single colony in all that time, nor have I ever lost a colony in the cellar.

The combs are never damp or moldy, and the bees keep their hives as clean and sweet as in summer, carrying out all dead bees and dropping them on the cellar bottom. I visit them with a light often, without ill effect, and can tell when they are too warm as soon as I enter the cellar, without referring to the thermometer I keep hanging near. I have no desire to dispute the conditions as stated by the writers who say it will not do to winter bees in the cellar with bottoms on the hives unless there is a wide, deep entrance, but just want to call their attention to the fact that in some other places other men may do differently, and do right.

Our bees winter on amber honey, as we have no other here, and I never weighed any that weighed over 12 pounds per gallon, and ours granulates about March after it is gathered. I think you will say that it cannot be the extra quality of the honey that makes the difference, but we think our honey quite good.

If my bees ever die off by the wholesale, I'll promptly let you know. J. B. DANN.

Gage Co., Nebr., Nov. 24.

[With all other conditions at their best, there is no reason why a colony might not winter finely in a cellar with entrance only one-half inch deep in any locality. Again, they might not, and it is well to be on the safe side.—C. C. MILLER.]

Convention Notices.

Michigan.—The annual meeting of the Michigan State Bee-Keepers' Association will be held at Thompsonville, Benzie Co., Jan. 1 and 2, 1900. There will be reduced rates on all railroads, and a special rate has been secured at all the hotels there at 75 cents per day. There will be an exhibition of the famous willow-herb honey, also of all the leading supplies used in the apiary, and latest improved implements. At least two, and perhaps three, of the A. I. Root family will be present, and other noted men. Everything indicates the largest meeting held in years. The subjects discust will be those nearest the heart of the bee-keeper, so come prepared to give your views, in exchange for the views of others. It will more than repay you for all the time and expense to attend.

Fremont, Mich. GEO. E. HILTON, Pres.

N. E. Ohio, N. W. Pa.—The Northeastern Ohio and N. W. Pennsylvania Bee-Keepers' Association will hold their 19th annual convention at Andover, Ohio, in Chapman's Hall, Jan. 17 and 18, 1900. Boarding rates of $1.00 per day have been secured for those attending the convention. All bee-keepers invited. Send to the Secretary for programs.

Among the subjects to be discust are the following:

"Spring and Early Summer Management of Bees," by Mrs. C. J. Cornwell; "Is it Desirable to Prevent Swarming?" by O. O. Belden; "Best and Cheapest Method of Producing Comb Honey," by M. E. Mason; "Full Sheets or Starters," by C. H. Coon; "Advantages of Producing Extracted Honey," by B. W. Peck; "Co-operation to Improve the Market and Increase the Price of Honey," by Geo. Spitler; "Preparing Bees for Winter," by R. D. Reynolds; "Bees as Pollenizers of the Blossoms," by Ed. Jolly; and "Making Our Association More Useful."

Franklin, Pa. ED JOLLEY, Sec.

Illinois.—The executive committee of the Illinois State Bee-Keepers' Association have changed the date of the ninth annual meeting to Dec. 26 and 27, 1899. It is understood that all the railroads will make half rates during the holidays. The State Horticultural Society and the State Teachers' Institute hold their annual meetings at the same time, and all at the State House, so that it will be a great inducement for a good attendance. We expect to have a fine program for the occasion, and a good time, as bee-keepers always do when they get together. Come, everybody!

LATER.—Since the insertion of the previous notice the railroads, thru the Western Passenger Association, have refused to make a single fare rate for the round trip, but made the rate of one fare and a third for the round trip. If any one when purchasing a ticket is refused the one-third rate for the round trip, he must demand a certificate showing that he paid full fare coming, and together with the Horticultural Society we expect to have much more than 100 in attendance, and thereby get the above-named rate.

Bradfordton, Ill. JAS. A. STONE, Sec.

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We have spent $4,000 on our new book, "How to Make Money with Poultry and Incubators." It tells it all. Leading poultry men have written special articles for it. 192 pages, 8x11 in. Illustrated. It's as good as

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Box, filler and directions with each pen. Every pen guaranteed for one year, by the manufacturers.

Readers of the American Bee Journal will be given a **discount of 20 percent** off above prices, as we have made special arrangements with the Diamond Point Pen Co., to give our patrons this absolutely perfect fountain pen at the wholesale price.

To secure this wholesale discount on the above fountain pens, you must send your orders direct to this office, enclosing the number of the pen you want, and a postal note or postage stamps, for the cost of same.

We are offering our readers an absolutely perfect fountain pen which is guaranteed to give entire satisfaction, as the Diamond Point Pen Co. fully warrant and guarantee them absolutely as represented.

If the pen points are not entirely satisfactory they will be exchanged at no extra expense if returned to the office of the Diamond Point Pen Co., 102 Beekman Street, New York, N. Y.

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We have two sizes of clear flint-glass Jars, No. 1 holding a scant pound of honey, with an opal or white top held on with a screw metal band under which is a rubber to prevent leakage. No. 2 is a rather tall flint-glass jar with tin screw-cap, holding ¾ pound of honey. Both are excellent for retail honey-packages, and are put up in single gross lots. The prices are per gross, f.o.b. Chicago, for the No. 1 jars, $5.25; for the No. 2, $4.25.

We can fill orders promptly for these jars. They give excellent satisfaction, we know, for we have used the same jars for several years.

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J. M. Jenkins, Wetumpka, Ala.

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IT IS SURE TO EXERT A POWERFUL INFLUENCE FOR GOOD

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NOT TO BE HAD —IN— BOOK STORES

NEWS AND GOSSIP OF A NEW BOOK ON THE BIBLE have been current in book and Christian circles everywhere for some months Its authorship was to be combined the superb talents and literary abilities of three of the greatest lights in the world of religious literature.

The book is about to appear and on its title page in collaboration as authors are found the names of that most popular of all writers, IAN MACLAREN (Rev. John Watson), together with H. M. WHARTON, D.D., the great Evangelist, and J. WILLIAM BUEL, Ph.D., one of the most prominent and popular writers on Biblical subjects. A MASTERPIECE INDEED must be the book which calls to its creation such a combination of unmatchable talents. IT IS A MASTERPIECE—and it is good news we bring our readers when we tell them that after the most persistent endeavor and the most industrious and earnest negotiations with the Publishers, this paper is one of a syndicate which has secured the entire first edition for distribution among their subscribers, not as a means of wluning profits, but to encourage the people to become regular readers, because of the unusual privileges which are offered regular patrons.

The book is entitled "THE GOLDEN MORNING," and while it was intended to be a $5.00 book, and has everything about it—authorship, illustrations, paper, printing and binding—to warrant that price, we have, after many objections and refusals, made terms whereby WE ARE IN POSITION TO OFFER IT TO OUR READERS AT A GREAT REDUCTION. It contains nearly 800 pages and over 500 superb illustrations. It is printed with clear type on coated paper, and is bound in beautifully illuminated covers, with gold and colored stamping.

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It will be of highest value to the young, as from a few readings, they will get such an understanding of Bible truths and promises from this book, that it would require years for them to gather through Bible reading or study. Indeed, one of the chief claims of "THE GOLDEN MORNING" to universal popularity, is that the children will learn to reverence and love the Bible and to accept its teachings through reading this charmingly written story.

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HONEY AND BEESWAX

MARKET QUOTATIONS.

CHICAGO, Dec. 12.—We quote best white comb at 15c; an occasional small lot of fancy sells at 16c; off grades of white, 12@14c; ambers, 10@12c. Extracted, 8@9c for fancy white; 7@8c for amber; 6@7c for dark grades.

Receipts are larger and the demand is not as good as it has been; most of the retailers have laid in a supply to carry them over the Christmas time. R. A. BURNETT & Co.

CINCINNATI, Dec. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth

KANSAS CITY, Dec. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK Dec. 10.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c., as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CLEVELAND, Dec. 1.—Fancy white, 16@17c; No. 1 white, 15@16c; No. 1 amber, 13@14c; No. 2 amber, 12@13c; buckwheat, 9@10c. White extracted, 8@9c. A. B. WILLIAMS & Co.

SAN FRANCISCO, Dec. 6.—White comb, 11½@12½c; amber, 8@10c. Extracted, white, 7½@8c. light amber, 7@7½c; amber, 5@5½c; Beeswax, 26@27c.

Values are being maintained at previous range with stocks light of all descriptions. It is doubtful if five carloads of honey could now be secured in the whole State. Shipments by sea the past week were over 300 cases, the major portion being destined for New York.

BOSTON, Dec. 8.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

There is very little now to report in the line of our honey market. The retail trade are loath to pay the higher prices and are buying in a very small way, still the demand is fully equal to the supply. BLAKE, SCOTT & LEE.

ALBANY, Dec. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.
MACDOUGAL & Co.
Successors to Chas. McCulloch & Co.

OMAHA, Dec. 11.—The November trade has up to the present not been as good as was expected, and shows a falling off from October. It seems that the somewhat higher prices this fall are affecting the consumptive demand to some extent, still the warm weather yet prevailing in this part of the country may also be partly responsible for it. While trade has been light, prices have been well maintained, nobody being burdened with stock to such an amount as to become oppressive.

Fancy white still going at 14@14½c, and light amber 1 cent less. Extracted, white, 8@8½c.
PEYCKE BROS.

DETROIT, Dec. 11.—Fancy white, 15@16c; No. 1, white, 14@15c; dark grades, 10@12c. Demand good and supply light. No extracted in market. White would sell for 8@8½c. Beeswax, 23@24c.
M. H. HUNT & SON.

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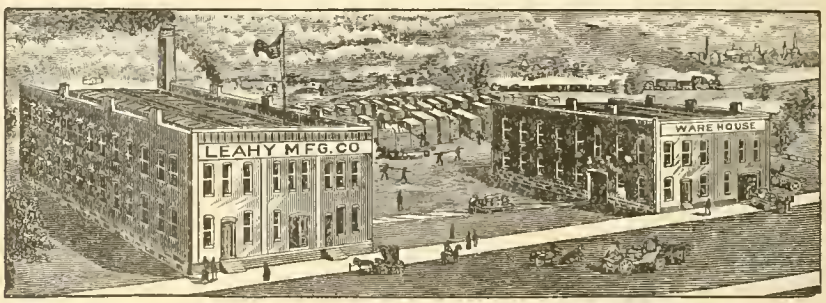

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39th YEAR. CHICAGO, ILL., DECEMBER 28, 1899 No. 52.

Some of those who attended the Convention of the U. S. Bee-Keepers' Association

Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

CONVENTION PROCEEDINGS

Report of the Proceedings of the 30th Annual Convention of the United States Bee-Keepers' Association, Held at Philadelphia, Pa., Sept. 5, 6 and 7, 1899.

BY DR. A. B. MASON, SEC.

[Continued from page 805.]

THIRD DAY—EVENING SESSION.

The evening session was called to order by Pres. Whitcomb, and Dr. Miller sang "Dot Happy Bee-Man," after which a paper was read by Mr. F. Hahman, secretary of the Philadelphia Bee-Keepers' Association, on "Our Pursuit as Viewed by an Amateur."

Those in attendance on the sessions of the convention had become so well acquainted with Mr. Hahman in his untiring efforts to provide for the comfort of the delegates, that when he stept forward to read his paper, he was greeted with most hearty applause by every one present, to which he, in a humorous way, responded by saying, "I am glad you applauded *before* I read my paper," inferring that no applause would be accorded him at its close.

Mr. Hahman—I wish to state here that I did not write this paper to-day. I wrote it last week, and I want to say that Mr. Selser, in his paper, *did* mention beeswax as a product of the bee, but he pretty nearly forgot it. I was also pleased to hear last evening that away in the time past hives were used. Long before they used glass isinglass was used. The amateur breeds bees for beauty.

Our Pursuit as Viewed by an Amateur.

There is one side of apiculture which has not been exploited in our bee-periodicals to the extent which has obtained in the race for perfection, as viewed by the professional bee-keeper, and yet a great part of our devotees are of the amateur class—men and women who keep bees chiefly for pleasure and study, and only incidentally to produce honey. That this class of bee-keepers view our pursuit somewhat differently from the man in pursuit of dollars and cents must be obvious.

The amateur is not tied down to make his living, either partially or wholly, from the management of his colonies, and follows the fad, if we may so term it, mainly for the pleasure, recreation, instructive study and genuine enjoyment which the keeping of a limited number of colonies affords. It will thus be seen that the keeping of a few colonies of bees offers many inducements to him who looks after them, and, unlike other hobbies, is scarcely ever a drain on his purse, on the contrary it frequently augments the same.

Bee-keeping appeals to the amateur, first, in the study of the insect in a scientific capacity, its anatomy and object and function or natural history. It is superfluous for me to enter into details of a study, which has been so carefully and ably elucidated in Frank Cheshire's great work, but the enjoyment derived by every bee-keeper from the investigation of the marvellous structure of our bee, and the adaptability of all its organs to the uses for which they are intended is a never-ceasing source of enlightenment of the sublime in creation. The entertainments of microscopical observation of our Philadelphia Bee-Keepers' Association during the winter months, I feel safe in saying have been an enjoyment as well as instruction to its members, for there is sufficient zest in the pursuit of this study, in determining the status of a few of the organs of our pets, which, despite the careful observation and investigation of scientists, seem to baffle scrutiny in determining their exact and positive service. Another side-light of the natural history of bees is their unconscious labor in the fertilization of flowers, making a rather pleasant study of their habits in spring and summer time.

Fully as instructive and enjoyable is the study and observation of the interior economy of the hive; perhaps I may add that it is the chief attraction holding the amateur steadfast in the rank of the bee-keeping fraternity. Nowhere has the fascination of this part of bee-keeping been exprest in more beauteous language than in Rev. Langstroth's masterful work—he who was the father of bee-keeping, whose name shall endure for all time.

In viewing bee-keeping from its practical side, there are only a few minor considerations which do not also apply to the professional's view for its betterment.

One of the points which has quite a future, and has not received the thoughtful, fostering care and impetus it deserves, is the production of beeswax. The commercial value of beeswax has been rather overlookt by bee-keepers. The persistency with which this product of the bee has been adulterated in commerce, and the untiring efforts put forth by chemists to find a substitute for it, as used in industrial arts, are conclusive, tho negative proof of its value. If the same thought and experiment as applied to increasing the production of honey per colony were applied to the production of beeswax, I believe the possibility of managing apiaries for this product alone would result therefrom.

The decadence of the observatory hive is something which the amateurs should rectify. It is strange that this hive should have almost disappeared from our supply manufacturers' catalogs. There ought to be no well-regulated apiary, whether it is a professional's or amateur's, without at least one of these hives. Its very name is prophetic. By its use much knowledge of the habits of bees can be obtained which never can be acquired in any other way, notably the action of the bees in comb-building and the elaboration of wax.

The breeding of queens has reacht a point where the requirements of professional and amateur seem to diverge hereafter. It now appears that the professional bee-keeper will want queens strictly for business only; the keen competition in producing honey for the market has made this an imperative necessity, and a correct one also. Not so with the amateur; he wants bees for beauty, a few pounds of honey more or less does not dim his vision—he wants fine-looking bees. We all know that the beautiful five-banded golden Italians, and the gentle and handsome albino variety, do not embody what might be called the acme of honey-gatherers, but I think all of my fellow-members have noted, at some of our local gatherings during the summer-time, the pride with which the owner of these handsome bees has exhibited them, and the longing look cast their way by those less fortunate in possessing their equal.

We of the amateur class are with few exceptions fond of bees presenting a beautiful appearance, and the queen-breeder must not lose sight of this fact in catering to the wants of this large class of bee-keepers in the future.

The improvement of our stock is of vital importance, and the improvement attained up to date is truly marvellous, considering pranks which Nature plays on us in the fertilization of queens.

In the breeding of animals and plants man's superior knowledge and skill have wrought wonderful changes in adapting both to his uses and profit. He has, for instance, produced horses for speed, and horses for draft purposes, which differ as widely in appearance as they do in the uses for which they are intended, both kinds having been produced by careful selection of adaptable breeding-stock. In the matter of cattle, numerous breeds have been developt, and as regards fowl, the different strains and varieties are almost too numerous to mention.

In the vegetable kingdom the improvement attained by the horticulturist from the fertilization of flowers and the raising of seedlings, resulting from the skill of his selection of parentage has been truly startling, and vastly surpasses the changes produced in the animal kingdom. A comparison between our cultivated flowers, fruits and vegetables, with their progenitors, growing in their native habitat, will exhibit changes which are not easy of comprehension, and seem doubtful of veracity to the beholder.

With facts thus accomplisht by careful selection and breeding, the possibilities of improving our strains of bees would be a foregone conclusion, provided the apiarist were able to control the mating of queens and the selection of individual drones for that purpose. We are aware how the workers in one colony are not all alike, and the queens produced from one mother do not resemble each other exactly; so do the drones of a colony differ in many essentials, and I believe more so than do the workers. If it were possible to select the breeding-drones, not as a body, but individually, it would not be long before we would have bees with longer tongues, bees with greater wing-power, and bees better adapted to withstand atmospheric changes of temperature. This problem ought to be, must be, and in all probability will be, solved at some future date. With the present uncertain practice of selecting the drones of one colony as a body, in the hope that they will constitute the stock for

breeding purposes, it appears to me that the drones are judged too much by the merits of their sister workers. It must be borne in mind that the drones of a colony seem to be the product of a previous generation, and the characteristics of the colony from which the queen has sprung is the one to look to for a guide of the collective value of her drones. How many queen-breeders keep any such record? I think but few. In the rapid interchange of breeding-mothers thru the mails, what guide have we of her parentage, or, rather, of her fraternal comparisons, of which her drones appear to be a reproduction? I can safely answer, not much to boast of; we work considerably in the dark; but we must seek the light, and endeavor to improve our understanding, and progress will crown our efforts whether we are professional or amateur bee-keepers.

F. HAHMAN.

Mr. Selser—I would like to say that this question of controlling bees and improving the stock is an important one. I was struck when going to Mr. Hahman's house to see black bees, and when I left the neighborhood I made up my mind that he owned about all the yellow bees in the neighborhood; I askt him how he managed it with so many black bees around him. He said he kept a large number of drones.

Dr. Mason—What methods have been proposed by which we can control this matter of fertilization? In the Bee-Keepers' Review there appears a method that seems to be very practical. Confine the drones you want to use, and the queens you want fertilized, and put them in the cellar until the time other drones are thru flying for the day; then let free the drones and queens you have confined, and the probabilities are that the queens will be fertilized by the confined drones.

Mr. Stone—Why not use drone-traps?

Dr. Mason—They don't confine the neighbor's drones.

Mr. Stone—I want to mention another matter, and perhaps I can get a little light. In our State (Ill.) we need a foul-brood law, and I believe it was the amateur bee-keepers that defeated it. We greatly need such a law.

J. H. M. Cook—The amateur bee-keeper, in the sense of this paper, is one who studies the habits and work of the bee; but the careless farmer who keeps a few bees is the one who does the damage.

President-elect E. R. Root gave notice that the next annual meeting of the Association will be held in Chicago, the time of the meeting to be given later, but will be during the G. A. R. encampment.

Mr. Secor, chairman of the Committee on Resolutions, presented the report of the committee as follows:

REPORT OF THE COMMITTEE ON RESOLUTIONS.

WHEREAS, It has pleased the Ruler of the Universe to remove one of our loved and honored members from his field of earthly activity; therefore, be it

Resolved, That in the death of our brother, Miles Morton, of New York, the industry of bee-keeping has sustained the loss of an active and capable honey-producer, a master mechanic, and an honest man of high character.

Resolved, That the labors of George W. York, editor of the American Bee Journal, in the prosecutions for the adulteration of honey, are appreciated by this Association, and we bespeak for his journal the hearty support of all bee-keepers, as a partial remuneration for his disinterested services.

Resolved, That the thanks of this Association are due, and they are hereby heartily tendered to the Philadelphia Bee-Keepers' Association for the uniform kindness and courtesy shown to our members during this convention, and especially for the unceasing activity and kindness of W. A. Selser and F. Hahman, of the Entertainment Committee, in looking after our comfort while in this beautiful city. The Philadelphia Bee-Keepers' Association has confirmed and emphasized the fact that we are in the "City of Brotherly Love."

The services of Mrs. Wilber W. Miller, who has so ably read the papers before this convention, are hereby acknowledged. She has given this Association great pleasure, and we desire to express our thanks.

Miss Hohrlein, of St. Louis, who has so skillfully played the accompaniments to the songs sung, is entitled to grateful acknowledgements.

EUGENE SECOR,
E. R. ROOT,
W. Z. HUTCHINSON, } *Committee.*

The resolutions were approved by a rising vote.

Mr. Abbott—I most heartily agree with the committee about the entertainment. I have never attended a convention anywhere where I felt so much at home as I have here. Every effort has been put forth for our comfort, and those efforts have proved a success.

Dr. Mason—I wish to emphasize the resolutions. I don't think we can speak too highly of our entertainers. I thought those fellows in the "wild and woolly West" did everything up in grand style, and they most certainly did well in providing for the comfort of the delegates who attended the conventions at Lincoln and Omaha, but if there were not any of them here, I should say the Philadelphia bee-keepers had "knockt the socks clean off of them." As Dr. Miller says, each year we can do better.

Pres. Whitcomb—Remembering the two meetings that have been held in Nebraska, I realize how hard Mr. Hahman and others here have workt. I trust that we will all meet again in Chicago in 1900.

The convention then adjourned.

A. B. MASON, *Sec.*

The Proceedings of the Utah Bee-Keepers' Convention.

REPORTED BY GEO. E. DUDLEY.

The Utah Bee-Keepers' Association met Nov. 24, 1899, in Salt Lake City, with Pres. E. S. Lovesy in the chair, and Geo. E. Dudley was appointed secretary *pro tem.*

The first subject for consideration was the loss of bees during summer, by the bees crawling about outside of the hives and dying in great numbers. Mr. Cornwall reported that he had this trouble among his bees every year, beginning about the middle of August, and lasting about six weeks. It seemed to be the judgment of several present that the smoke from the smelters caused this trouble. So far no remedy had been found that would relieve this difficulty.

The wintering of bees was next discust. Mr. Lovesy gave several illustrations in proof that bees must have ventilation in winter. If they are sealed down air-tight they would sweat, the bees and combs be damp, the air would become foul, and this would make the bees too weak to seek their stores; they would thus die of starvation. He said he found this to be the case every spring, while bees that had sufficient ventilation usually lived.

Foul and pickled brood was next considered. Mr. Hone gave his experience with pickled brood. He used salt and sulphur as a remedy, and cured the trouble. He thinks the dairy business is injuring the bee-industry by feeding the sweet clover and other flowering plants off the land.

Mr. Hone also related some of his experience with foul brood. He spoke of cleaning the hives thoroly, and not giving them the chance to become foul.

Mr. Schach said that he had cured pickled brood by a free use of dry slackt lime and salt, scattering all thru the hive. He said it cleansed and purified the bees, and kept down disease.

Mr. Lovesy, in giving his experience with foul brood, opened up a new field for investigation. He said that in localities where foul or pickled brood was prevalent he had examined many apparently healthy colonies, with no sign of any disease about them other than sometimes a few or more cells of the brood showed a wrong or back presentation. He said that later they turned out either foul or pickled brood if left alone. He gave it as his opinion that the larvæ were already diseased, and in their agency turned over with their heads in the bottom of the cells, and died in that position, as it was impossible for them to hatch out. He said it was easier to treat the disease at this stage than to wait for further development.

Secretary Fagg said that twice this season he had caught the bees killing their old queen, and concluded that the subject of requeening could be left to the bees.

Mr. Bangitor said that last year he had 35 colonies, increast to 82, and took off 10,000 pounds of honey; but this year from the 82 colonies he got only 700 pounds, while some of them died thru the winter and spring. He believed that many of his bees were poisoned by spraying with Paris-green.

Mr. Hone said a weak colony having a queen could be placed over a strong colony and they would not kill each other, but would live and build up by the upper colony receiving heat from the lower.

All present favored the sale of comb honey by the case instead of by weight.

In his address delivered at the meeting, Pres. Lovesy said:

"As far as the bee-industry is concerned, this has been a peculiar season, and in many parts of the State it has been anything but a profitable one for the bee-keepers; while in some localities the winter losses were not so severe, the wet, cold, backward spring was very destructive, some bee-keepers suffering heavily, and even those bees that were left were so reduced that while many of them built up, and some of them did very well, others lingered along, and some of them died off thru the summer. But it is pleasant to note that in the south and southeast parts of the State, as also in parts of the southwest, the conditions have been more favorable. Some bee-keepers in those localities inform me that their bees never did as well before as they have this year. I have received reports from different parts of the State, ranging all the way from nothing up to 282½ pounds per colony, spring count. While a few have reported a scant honey-flow, many have reported that it has been abundant: thus the fault, as a rule, where success was not obtained, seems to have been climatic conditions, and a lack of strong colonies to collect the flow of honey; the principal cause of these conditions being the unusually severe weather in the month of May in the north, and in some portions of the central part of the State. As a rule, the honey crop is excellent in quality, and the prices are fair, with a good demand.

"I have received many complaints in regard to the fruit-spraying. We had hoped that this question was settled for all time, but, like Banquo's ghost, it bobs up again. There are more wild theories advanced in regard to this matter than there are about any other subject. It would be very gratifying if some plan could be adopted to remedy this matter effectually."

CONTRIBUTED ARTICLES

No. 2.—A Colony of Bees—How to Make the Most Out of It.

BY "OLD GRIMES."

I WILL suppose in this instance that the bee-keeper desires to make as much advancement as possible and to keep abreast of the times. When I was a boy and lived at Old Grimes' homestead, the box-hive was used exclusively, and I have no doubt my grandfather, Old Grimes, could have written a volume upon the benefits of said hive over the earlier straw-skep or the hollow-log.

But the Grimes family have now moved out more into the center of our Nation, and the progress of bee-culture has moved along also to a more improved management, and tho, like my grandfather, I am called Old Grimes, I have not learned all there is about bee-keeping—there is enough left to the business to keep the younger generation busy improving for a long time.

In article No. 1 the reader has learned that to get the most out of a bee-hive it must be of good material and well made, and the same terms can be applied to the bees that occupy it.

My long experience teaches me that to have a colony do its very best in 1900 I must commence to prepare it in this year 1899. A first requisite is a vigorous race of bees, and for an all-purpose bee I would recommend the Italian. The Carniolan race has within the past few years gained many advocates, but the test of further time will be necessary to allow it to equal the Italian, if it ever does.

In order to get the most out of a colony there is a general consensus in the fraternity of bee-keepers that the prosperity of the colony is centered in the queen; from my own, and the experience of my ancestors, that is all very true, but before the advent of queen-breeding the drone held an equal if not a superior place in the eyes of the apiarist. And why not? In the rearing of a superior race of horses the selection is in the male line, the same in the rearing of all other animals, the same in poultry and other feathered tribes. But in bee-culture the breeding from a superior strain of males is a more difficult problem, and the energies of the breeder are centered upon the easier problem surrounding the queen.

Not only should queens be reared from colonies showing markt desirable traits, but they should be mated to drones not kin, and showing desirable traits. Isolation is so necessary in these cases that the queen-breeder, if he does not altogether ignore the drone factor, relegates it to the background. The future queen-breeder, or the breeder who wishes to compete for the prize of a hundred-dollar queen, must give more attention to the drone, and I guarantee that those colonies of bees that have made phenomenal records were made so from a chance combination of desirable traits. The bee-keeper who desires to get the most from his colony should continually bear in mind that he should leave nothing to chance.

In order to rear good queens I have no further advice than to refer the reader to the books bearing upon that subject, and I regret I cannot refer to a treatise upon drone-rearing, for in the Grimes family it is held in equal importance, and it seems that the only point neglected in this age of progress is the mating of queen and drone thru continued selection and isolation.

Having a good strain of bees, the next requisite for their welfare is a generous master. As a rule, a colony of bees that have been robbed by a penurious owner until they have barely enough stores to last them until spring, will not amount to much unless conditions are exceptionally favorable. The wintering of bees in our cold climate is far from a certainty, and the problem still vexes a great majority of the fraternity. The Grimes family have settled several points in this line to their own satisfaction, and one of the chiefest is an abundance—yes, a superabundance—of good honey for wintering.

Another factor is a cellar of even temperature; and a cellar in porous soil is better than one in clay or hard-pan; the latter can be made healthful by digging it deep, and filling in a foot or more of the bottom with stones and providing ample drainage. In order to winter successfully every time, give the bees plenty of ventilation under the brood-chamber, and ample space for all dead bees to drop free from the combs. A rim at least two inches in depth, with several ventilating holes in it covered with wirecloth, should be placed between the bottom-board and brood-chamber for this purpose.

There should be no upward ventilation; loose covers, mats, quilts and cushions have been the cause of the death of more bees than any other cause in wintering, and to hold the heat more effectually in the hive, an even-fitting honey-board should be used, and over this a telescope cover.

The hive-covers of the day are for the most part cheap and flimsy, and the flimsiest of all are those made of many pieces. A cover that merely rests upon the top of the hive with nothing to hold it in position except as the bees glue it, is not worthy the name of cover, and by some is rightly termed a "lid." The long and the short of it is that a cover covers, and a lid does not cover. A lid may answer when the weather is warm and the colony strong, for they are in a condition to close quickly the openings if broken, but in cool weather, or when a super is added, or when a colony is in medium or weak condition, a lid is always loose, and the vitality of the colony in the form of heat is constantly wasting.

The old adage in reference to the preservation of health in a person—"Keep the feet warm and the head cool"—should be reverst in the case of a colony of bees. The cover should cover not only during the winter months, but after the bees are put out upon the summer stand it is more necessary that the upward ventilation should be closed. At this time it is with a colony of bees as with a steam engine—if the engineer sends the steam from boiler to engine thru a defective pipe, he will not get much out of his engine. This principle holds good even in cool nights in the hight of honey-gathering, and in any climate, and on this account I call for a radical change in cover construction.

A colony of bees that comes out in the spring with a whoop and a hurrah is a source of pleasure to the generous master, and it requires but little attention: this should be given at proper intervals in order to get that old, dark honey, with which the outside combs are filled, manufactured into brood. This is easiest done by uncapping a comb and inserting it in the center of the brood-nest; but please exercise caution here, for more harm than good is oftentimes done. Never interfere thus violently with the broodnest until there are five or six frames in which there is hatching brood. When the brood-chamber is brimful of bees, put on a half-story extracting-super. I prefer these

half-story supers for many reasons. It takes less heat to warm them; bees get to work in them earlier; the increase is gradual and keeps pace with the increase of bees; the bees will not leave them during cool nights—this is especially the case when a *cover* is used. If there is dark honey gathered from willows or apple-bloom it is stored here, and this, too, can be converted into brood; give the queen unlimited room until clover is in blossom.

I am now ready to try to get the most out of my colony, but as that operation merges so closely into more than one colony, and having occupied much space in getting up to this point, I shall ask the reader to consider the next article, where I will tell how I get the most out of an apiary.

Painted or Unpainted Hives—Which?

BY C. DAVENPORT.

PROBABLY in few if any other pursuits are there so many conflicting opinions held as there are in bee-keeping in the matter of painting hives. There is a great difference of opinion. One of the oldest and most successful bee-keepers in this State, and a man whose opinion I hold in great respect, is Mr. Theilmann, who is a strong advocate of unpainted hives, and claims that they will last as long or longer than painted ones, but my experience has been directly opposite to his. With me, unpainted hives last only a few years before the wood begins to check, warp and decay; while I have some painted hives that have been in use by myself and others for about 20 years, and they are to-day apparently in nearly as good condition as when new; and last season I had to discard some unpainted ones that had only been made eight years, both the painted and unpainted ones having been used under the same conditions, and usually set in the same yard.

Strange as it may seem at first thought, I have found that the locality makes a great difference about the durability or length of time a hive will last, and even one mile may make a great difference in this respect. My present location is a very hard one on hives. It is in a sort of opening between two high hills to the south and north; a few rods to the west is a very sandy and much-traveled road, and during dry times, when the wind is in the west, as it is much of the time, dust and sand raised by passing teams floats over the yard and settles on the hives, and if there are any cracks in a hive where it can find lodgment, it greatly hastens decay, for the pine dust from sand is very destructive to lumber, as is sand itself.

Probably all know, for instance, that a fence-post set in sandy ground will not last nearly as long as it will in clay or black soil; besides, this yard being on very low ground, the hives are covered with profuse dews at night, and are subject to the glaring sun during the daytime, which makes it much harder on them than if they were on high ground and shaded.

I have had many unpainted hives in this yard warp badly, twist and check in one season, and I do not believe painted or unpainted hives will last here much more than half as long as they would in other places but a short distance away, where I have had yards located.

No less an authority than Mr. Doolittle, and, I believe, Dr. Miller also, claims that bees do better in unpainted hives, for they say that the moisture generated by the bees can escape thru the pores of unpainted lumber. I have used painted and unpainted hives ever since I have kept bees, and have never been able to observe any difference whatever in this respect. I have some hives all parts of which are well painted, both inside and outside, and bees do just as well in them as in hives not painted at all, so far as I can see. But it is far from my intention to dispute what either of these men say, tho, if I did, I am aware that it would not matter, as the opinion of either one of them is as it should be—of more weight than that of any number like myself would be.

The only way I can account for the difference in our experiences is that there must be less, or a different kind of, propolis gathered in their locality from what there is in mine, for here, after a hive has been in use some time, the inside is smoothed and coated over with propolis of such a character that it will hold water as well as a tin dish, so there is no chance for moisture to escape thru the wood if the hives are not painted.

Unless they are kept well shaded during warm weather, white is the best color to paint hives, for without shade during hot weather, when honey may be yielding freely, bees will be able to work in white hives, when, on account of the heat, they would be driven out of unpainted or dark painted ones.

Linseed oil, white lead and zinc make a good white paint. It is expensive, tho, and is far from being as durable as some of the cheaper kinds of paints, but there is not, so far as I know, anything besides white lead that will give a pure white color.

A great saving can be made, however, by using and first painting hives well with linseed oil and any of the mineral ochres. These are of different colors, but the color does not, I think, matter, as I believe they are all the same thing; but my actual experience has been with what is known to the trade as "red ochre." This can be procured at nearly all places where paint is sold. It is very cheap, and makes a much better and more durable body mixt with linseed oil than white lead and zinc does, and is not, after it is dry, at all offensive to bees.

The painted hives I spoke of as being used 20 years, were painted with this kind of paint, and the paint itself is on most of them in good condition yet, and I believe this paint preserves the wood much better than white lead does. After hives are well painted with this kind of paint that is thoroly dried, they can be painted with white lead and changed to a snow-white color with but small expense comparatively, all cracks, as well the pores of the wood, being filled with the cheaper paint, it takes but a small amount to cover them again. The white paint adheres well to this ochre paint; better, in fact, I believe, than it does to the wood itself. I think that it was 11 years ago that on some of these red hives I painted large numbers with white paint that can still be read rods away.

To obtain the best results with white lead, whether it is used alone or in connection with this ochre paint, I have found that it pays to mix some zinc with it. When the lead alone is used it will last but a short time before it begins to "chalk," as painters say; that is, it flakes and rubs off like whitewash does.

I have heard it said that if lumber were saturated or soakt in a strong solution of lime water it would last much longer. Three years ago I slackt some fresh lime in a barrel, and after the solution had settled I dipt off the clear liquid and soakt a few new unpainted hives in it. While time has not been sufficient to prove whether the lumber will last much longer, I found that hives so treated were not offensive to bees, and I have never observed any moth-worms incrusted on the under side of these bottom-boards, as I have many times found on both painted and unpainted ones. Southern Minnesota.

Bees and Their Feathered Foes.

BY H. L. JONES.

EDITOR YORK:—On page 450, Prof. Cook mentions that he would like to know how birds manage the stings when they kill worker-bees. I enclose a clipping showing how some of them manage here. I would like Prof. Cook's comments thereon, as it seems almost incredible that birds can be stung thus with impunity. H. L. JONES.

Queensland, Australia.

[The clipping referred to by Mr. Jones is an article written by himself and publisht in the May, 1899, issue of the Australian Bee-Bulletin, reading as follows:—EDITOR.]

In writing on this subject, I do so as much from a desire to draw information from others, as to throw any new light on the subject myself. We have undoubtedly a good deal yet to learn in this direction. In looking up the writings of various authors in other countries, I find that a large number of different kinds of birds are included in the list of "Enemies of Bees," but as I may have something further to say about this later on, I will confine myself in this article only to birds that have come under my own observation.

The rapacious little martins were the first to introduce themselves to my notice as having a partiality for a bee-diet, and after them came along the magpie—yes, our common, innocent-looking magpie. In 1889, I first observed these at their mischievous tricks, and they came in numbers, too, selected a hive apiece, and gobbled up the bees as if to the manner born. Sometimes they caught the bees on the wing, but in most cases snapt them up as they alighted at the entrance. They carried on in this despicable manner for more than a month, but certainly didn't have it all their

own way, as in the meantime their numbers grew beautifully less—thanks to a reliable shot-gun.

The green oriole has, however, the honor of being the greatest gourmand in this line that I have yet encountered, and its capacity for stowing away bees and *stings* is simply marvellous. To secure its prey, it sometimes settles on a hive and catches the bees as they fly home; at other times it darts from some convenient perch and takes the bee on the wing; but its most favorite plan is to locate itself in a fruit-tree and either snatch up a bee as it alights on a blossom, or as it flies from flower to flower. In one of these little friends that I shot and made a post-mortem examination upon, I found 15 stings in the stomach, sticking into the lining of it, just like pins in a pin-cushion, some of them being very firmly implanted and imbedded almost up to the head. Another bird had no fewer than 27 stings imbedded in its alimentary canal, and also one sting with its poison-sac attacht sticking loosely in its throat at the base of the tongue. I sent on the head and stomach of one of these birds to Mr. H. Tryon, our Government Entomologist, and herewith append his report:

"The bird from which the head was derived that you submitted for examination on July 28, is an example of the green oriole (*Oriolus viridis*), a not uncommon denizen of Brisbane district, especially during the winter months. The portion of its alimentary canal, that you also left for inspection, contained, as you surmised, numerous bee-stings (seven of these were identified by me) that had partly penetrated and were still fixt in its mucous and muscular wall. There also occurred upon the inner lining of the viscus, and upon the bird's tongue also, several hairs that had been derived from the body of a bee. The special features presented by these hairs and stings, when considered together, yielded undoubted evidence that they were derived from honey-bees upon which the bird had fed. The green oriole is well known as being one of those birds that are both frugivorous and insectivorous. It feeds upon figs, mulberries, loquats, various berries, and upon insects generally. I am not aware that it has ever been previously noted, that it includes the honey-bee in its dietary."

Does it not seem an extraordinary thing that birds should be endowed with an immunity from the poison of a bee-sting, when *one* sting has been known to be sufficient to cause the death of a human being? Some writers, however, maintain that birds eat only drones, others that they extract the sting first, or else swallow the heads only, but these are certainly mistaken, as I have proved times out of number.

In regard to the martins, altho they have paid repeated visits to my apiaries, they have never caused much loss, as on account of a very accommodating habit they possess of perching together in a row, their destruction is easily accomplisht. The magpies, however, are among our most valuable insectivorous birds, and I therefore always put up with a good deal from them before resorting to violent measures, in fact it is now several years since I destroyed one, but the gluttonous little oriole is inexorably outlawed and therefore shot on sight, every time.

In conclusion I will mention that I have lookt up scores of works, right back as far as 1691, and while most of them accuse certain birds of eating bees, not one writer seems to have made the discovery that the stings may be swallowed with impunity, and may even pierce the walls of the stomach and yet to all appearance have no injurious effect upon the bird.

H. L. JONES.

A General Report for the Season of 1899.

BY J. S. HARTZELL.

ONE year ago I wrote an article for the excellent American Bee Journal and the fraternity of bee-keepers—a report of the product of honey from my apiary and my experience with the Golden system of managing bees for the production of comb honey. Now that the season of 1899 has closed, and with its closing I can but record in large type, FAILURE, I am in no way fitted to make up an account relative to any plan for the production of honey.

The spring of 1899 opened apparently favorable, bees building up rapidly, and were in prime condition for gathering nectar from all sources from which we expect surplus honey stored in sections in this part of country. Poplar, white clover, basswood, sumac and buckwheat all appeared in prime condition, but failed to yield the sweets desired. I do not think I ever witnest as dense growth, or as much bloom on white clover in these parts, but all of no avail.

I entered the season with 57 colonies, having lost 3 colonies during winter, and one colony queenless in late fall I doubled up. The product of honey from 57 colonies, spring count, in round numbers was 384 completed sections—an average of not quite 7 sections per colony, and very many light weights, therefore a very meager amount to make comparison of the Golden and general plan; and you know the demoralizing effect on the bee-keeper of having to record failure. Truly, they come too often, in this section of country, at least.

I have been engaged in the business of keeping bees since 1890, and can say truthfully that during the nine years I have not known one that the average yield from spring count of colonies was 50 pounds.

In 1894 I had 39 colonies, spring count, and the yield for that season was 1,500 pounds, which was the best I ever had, taking number of colonies into account, and the product was very superior in quality to any produced before or since. That season one colony produced 112 completed sections of honey, and the colony on scales, during basswood bloom, gained in one day nine pounds, but that for one day only, proving the best ever known in my experience.

My purpose has been, and is at present, to go out of the bee-keeping business, but thus far I must record failure in this, also, owing to my inability to get away from home last winter to dispose of my equipment. And to my great surprise now, I was induced by a proffer made me, to purchase 19 colonies more only a short time since, and now record in the yard 85 colonies, which I will endeavor to dispose of during the winter; and if failure is to be inscribed in this also, I will certainly emigrate to some more favored locality.

Owing to the meager amount of honey secured, the season now closed will not compare results of the Golden and general plans in its production, but I will say that colonies in Golden hives are much the best supplied with stores for winter, and now I have 52 colonies on the Golden plan.

Last winter was the severest ever known here, the thermometer indicating as low as 26 degrees below zero.

Our friend and critic, Mr. R. L. Taylor, criticized and somewhat doubted my statements concerning the report I made of honey poduced by the Golden and general plans in the season of 1898, and as I winter my bees on the summer stands I intend giving my experience with this very vital problem in this and many sections of our country, and would request the worthy critic named to explain, if possible, thru the columns of the American Bee Journal, "the why" of the difference or cause of success and failure.

Of 40 colonies wintered in Golden hives, the loss was none; of 20 colonies wintered on the general plan, the loss was 3. By the general plan I mean hives with empty supers on, and cushions of chaff in same, or colonies in winter-cases packt with chaff, and cushions on top. Will Mr. Taylor state which of the two plans he would consider preferable, from the experience as stated?

I have been noticing lately hints of $100 for a queen-bee—certainly a very generous offer, but if all the qualities stated are embodied in said queen, the amount would in my estimation be a mere pittance for her. However, here is an excellent opportunity for some of our noted queen-breeders to undertake to win the prize (if such it could be called)—I mean the $100. The queen I fully recognize would be a great prize.

Now, when the queen spoken of is produced, I will take it upon myself to add $100 more for her, conditionally—if all queens reared from the celebrated one mentioned produce bees that are equally good in disposition and gathering honey.

My experience has proven to me beyond doubt, that there is as much difference in queens and their progeny, altho reared from the same mother-queen, as there is in a family of children from the same parents. No two are of the same temperament or energy, and no two will show equally in prosperity with the same surroundings or in the same locality. Careful observation has imprest this indelibly on my mind, and I will freely pay a handsome bonus to any one engaged in keeping bees, say of ten or more colonies, where each colony stores an equal amount of honey. This being unknown and impossible, can we reasonably expect the much-talkt of queen to be brought into existence? Once produced, she would certainly be worthy a palace or crown—yes, both. And if I could by any means be informed in regard to time and place, I would certainly attend the ceremonies, and, if necessary, pay an admittance fee.

In conclusion, I will say that last winter's losses of bees to bee-keepers in these parts varied from 3 to 100 percent,

the easy, don't care, go-as-you-please bee-keepers suffering the severest punishment for their carelessness. Experience is said to be a good teacher, but whilst this is true it is rather expensive at times. Another maxim is, "Whatever is worth doing is worth doing well." The latter is most applicable to bee-keepers, especially now. Those who have neglected preparing their bees for the winter's storms should make haste and use the greatest care possible.

Somerset Co., Pa., Nov. 20.

Packing, Grading and Marketing Honey.

BY N. J. COOLEY.

(Read before the Inyo County Bee-Keepers' Association, of California.)

THERE has been much discussion on packing honey, occasioned by an article by Mr. Doolittle, in Gleanings in Bee-Culture, in 1898, in which he upheld that it was not dishonest to face cases with white honey and put inferior or dark honey in the body of the case, when sent to commission houses. He was "roasted" on all sides for his views, and letters were sent to commission houses thruout the country by the American Bee Journal asking their views. The unanimous verdict was that the bee-keeper got the worst of the deal in every instance when the goods were examined and sold on their merits. Mr. York summed up the whole proposition in these words:

"To face comb honey for market is wrong every time and everywhere."

The question for us to consider is what constitutes "facing." S. T. Fish & Co. instructed me, in repacking honey, to put none but honey of a certain grade in a case, but in putting sections next the glass to put the best and most perfect side out. I believe that facing to that extent is justified and desirable. Peycke Bros. condemn the practice of some producers, of putting good honey on the face but insisting upon slipping in a few imperfectly filled sections, thus placing the whole shipment under suspicion. Producers who put up their goods in this manner not only injure their own reputation but that of every producer in their vicinity.

A traveling-man a few days ago told me that on a visit to Bishop the past fall he was shown some beautiful apples by a rancher who had them for sale. Altho apples were plentiful at his home they were inferior to those exhibited, and thinking that it would be a treat to his family and friends, he ordered a box, and on his arrival home praised in extravagant terms Inyo apples, and the exhibit he would soon make of them. You can perhaps imagine his disgust upon opening the box he had paid a fancy price for, with freight added, to find all but the top layer hardly fit for hog-feed. That box might have sold 50 others had it been honestly packt, but under the circumstances it may head off many a prospective purchaser.

Hotel keepers at Hawthorne told me they bought their eggs at Omaha because they were better and fresher than those from Inyo.

If we ever expect to obtain a ready and regular market for our products we must stop selling cider-apples, rotten eggs and refuse honey as first-class goods. When people place their coin, confidence and consignments in our hands, they have reason to expect an honest deal, and if they fail to get it they will look elsewhere in making their purchases.

In buying honey last fall I was compelled to insist on some honey being repackt and graded, and to reject some altogether, because of inferior honey being put in that should have been kept for home use and extraction; and still, in one car, upon arrival at destination, there were over 300 cases leaky, mostly caused by defective sections.

Last year there was a shortage in many localities and buyers were not very particular, and the fact of Eastern parties sending their coin here and buying the honey at our doors was accountable in a measure to the short crop in the East. I, as their buyer, tried to impress upon the people here the importance of sending only first-class goods, and thus gain a reputation that would be of benefit to us in the future. One of our business men, who doubted the possibility of making arrangements for a cash sale of our honey, when the deal was consummated said, "It's a godsend to our people, but they don't know it."

I have some letters from Peycke Bros. in answer to letters written them by me, asking their opinion as to cases, grading, shipping, different varieties of sections, prices, etc., which I think will be of interest to you all, and perhaps will enable you more fully to understand their wants and needs the coming season if you desire to sell to them.

[These letters are too lengthy for publication, but from them the following is taken: "In regard to the quality of honey, on the whole we find it much better than we have had from there in previous years. Still, there is quite a good deal of room for improvement, particularly in the proper grading. As long as your people insist on putting even a few sections of inferior honey in the No. 1 cases, they will always be regarded with suspicion, and they will never be able to make a good, outright sale....Another season your people will find that they will have to send their honey into market on its merits, and it will behoove them to be very particular in their grading."]

In conclusion, I will add that I believe it pays to clean carefully all honey intended for market; carefully grade and pack in 24-pound section-cases, with wrapping-paper over and under the honey in the cases. Don't use old newspapers. The ink blackens the wood and gives the sections a dirty appearance. Don't put in sections not well filled; the extractor is a good place for them. Don't put in sections unless well fastened to at least three sides and fully capt over. Don't put in honey you would refuse to buy if offered to you over the counter; and, finally, don't nail down the cover with spikes—¾-inch brads are large enough.

Endeavor to get the reputation that some honey producers in Utah have, of whom a certain commission firm speaks as follows:

"We do not even have to bother about inspecting with them. They know just what we want and know that they will get their money just as soon as their bill of lading gets into our possession. We have shipt five carloads of comb honey from one point this season without having to go near there, and they are the prettiest goods put up anywhere in the United States."

What would be the worth of a reputation like that to the bee-keepers of Owens Valley? It would mean a sure market every season for all the first-class goods we could produce.

There is no fault with the locality. We can produce as fine honey as any place on earth. The trouble lies wholly in the manipulation and the methods adopted in cleaning, grading and packing for market. Let us strive for the reputation, and guard it jealously when obtained.

Inyo Co., Calif., Jan. 25, 1899.

York's Honey Calendar for 1900 is a 16-page pamphlet especially gotten up to create a demand for honey among should-be consumers. The forepart was written by Dr. C. C. Miller, and is devoted to general information concerning honey. The latter part consists of recipes for use in cooking and as a medicine. It will be found to be a very effective helper in working up a home market for honey. We furnish them, postpaid, at these prices: A sample free; 25 copies for 30 cents; 50 for 50 cents; 100 for 90 cents; 250 for $2.00; 500 for $3.50. For 25 cents extra we will print your name and address on the front page, when ordering 100 or more copies at these prices.

"The Hum of the Bees in the Apple-Tree Bloom" is the name of the new bee-keeper's song—words by Hon. Eugene Secor and music by Dr. C. C. Miller. This is thought by some to be the best bee-song yet written by Mr. Secor and Dr. Miller. It is, indeed, a "hummer." We can furnish a single copy of it postpaid, for 10 cents, or 3 copies for 25 cents. Or, we will mail a half-dozen copies of it for sending us *one new* yearly subscription to the American Bee Journal at $1.00.

Please send us Names of Bee-Keepers who do not now get the American Bee Journal, and we will send them sample copies. Then you can very likely afterward get their subscriptions, for which work we offer valuable premiums in nearly every number of this journal. You can aid much by sending in the names and addresses when writing us on other matters.

Queenie Jeanette is the title of a pretty song in sheet music size, written by J. C. Wallenmeyer, a musical bee-keeper. The regular price is 40 cents, but to close out the copies we have left, we will mail them at 20 cents each, as long as they last. Better order at once, if you want a copy of this song.

GEORGE W. YORK, Editor.

AMERICAN BEE JOURNAL.

ESTABLISHT IN 1861 — OLDEST BEE-PAPER IN AMERICA

DEVOTED EXCLUSIVELY TO THE INTERESTS OF HONEY-PRODUCERS.

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EDITORIAL COMMENTS

NOTE—The American Bee Journal adopts the Orthography of the following Rule, recommended by the joint action of the American Philological Association and the Philological Society of England:—Change "d" or "ed" final to "t" when so pronounced, except when the "e" affects a preceding sound.

The Happiest New Year ever known we wish to every reader of the American Bee Journal. May it also be the best year of your life so far.

The Annual Index is a special feature of this number of the American Bee Journal. It will be found very valuable for reference to all who have been careful enough to preserve the numbers as they have come to hand each week during the year. What a variety of subjects have been referred to in just one short year! Truly, the bee is a marvellous creature.

The Thirty-Ninth Volume of the American Bee Journal is completed with this number—nearly two score years have past since it was started by Samuel Wagner, and publisht in Philadelphia, Pa. A good many changes have occurred since then. Perhaps there are not more than ten of its regular readers who were keeping bees at that time and began then to read it. Nearly all of its old-time readers and contributors have joined the "silent majority," and we of the younger generation are left to carry on the work.

Talking on Bees to School Children.—In The Ruralist for October we find the following endorsement from Mr. J. O. Grimsley, the editor of the department of "Bees and Honey" in that paper:

Commenting on Editor York's "talk about bees" before the public school, the Progressive Bee-Keeper says: "Would it not be a good idea for all of us to follow Mr. York's plan, and see if we cannot have at least one lecture a year on bees, delivered to the children of our public school?"

Happy thought; it would certainly be an excellent plan which would, if the lectures were by well-informed, practical apiarists, lead to much good, not only to beedom, but to fruit and vegetable growers as well. Passing thru the fields and along the paths around the farm we see a bee working busily from flower to flower. What is it? Like Poe's raven, it is just a bee nothing more. It is gathering its daily bread nothing more. Thus goes the soliloquy of the common, everyday passer-by, who has no knowledge of the great work the humble little insect is doing for humanity.

It, with its thousands of co-workers, is laying up in a most attractive form, the most delicious of all sweets, and the purest that man can get. It, with its co-workers, is doing a grand work in the transmission of pollen from one flower to another, thus insuring a development of the fruit or vegetable crop. It, with its co-workers, and the colonies at home, furnishes one of the most interesting subjects for study that the enquiring minds can grasp. Yet it is a bee, only this, and nothing more. Like the sands of the seashore, it is only one among a countless number that is doing a great work while we sit idly by, under the shade of a spreading fruit-tree, wondering why the honey-bee was "made with a sting," and why "it is so ill," never stopping to think—always calling it "high-tempered," when in fact the human family is a thousand times more irritable. It is a bee, nothing more.

But let's all work to the standard, as set by Mr. York, and see to it that each public school gets a lecture on bee-keeping. The students will be benefitted, the county will reap its share, and beedom will be a rich gleaner.

Bee-Paper Publishers as Honey-Buyers.—In the Progressive Bee-Keeper for December, we find the following from F. L. Thompon:

"It is well to remember that the publishers of nearly all the principal bee-papers are also honey-buyers. If they know of sales at good prices that are likely to affect their own interests if generally known, they are NOT GOING TO TELL. It would not be business. No one can expect it of them."

We cannot understand why Mr. Thompson should have written that, unless he judges the publishers of bee-papers from what he knows of himself. But we are glad to be able to say that we are pretty well acquainted with the bee-paper publishers who handle honey, and know that they would not act as Mr. Thompson suggests he would if in their place, namely, *not tell if any honey sales were made at good prices.* We want to say for ourselves that such an insinuation is as untrue as it is unkind. We never have knowingly allowed our own personal interests to interfere with giving everything in the columns of this journal that any responsible and honest bee-keeper has reported to us concerning sales of honey. Certainly, we do not publish everything we know, for if we did, there would be some awful howling, and from just such people as write paragraphs like the above quotation.

So long as we pay the right price to the honey-producer, and he is satisfied, we are not going to worry about what anybody says when talking just to hear himself talk.

A Correction.—Editor Leahy says in the last issue of his paper that we "misrepresented the 'Higginsville' bee-hive cover" when speaking editorially of bee-supplies for 1900, on page 760. We certainly were not aware that we were misrepresenting anything in the least, and hereby apologize for an unintentional error. We do not wish to do a single individual, or even an apiarian fixture or implement, an injustice, and always feel like expressing our thanks when any one calls our attention to it, if he thinks we have publisht anything that is not borne out by the facts.

"Honey Calendar" in place of the Almanac—See p. 807.

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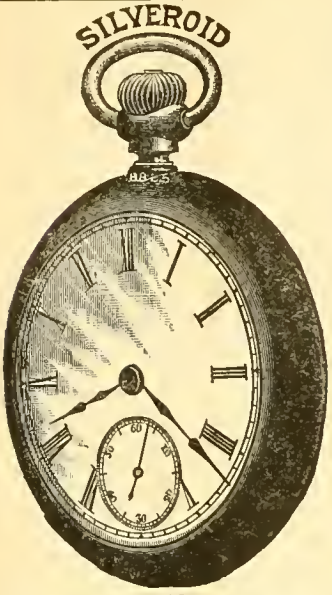

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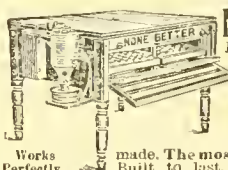

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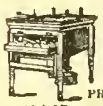

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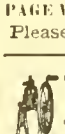

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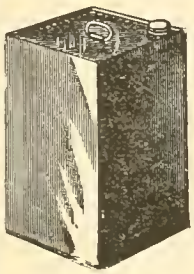

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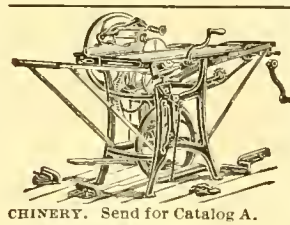

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Receipts are larger and the demand is not as good as it has been; most of the retailers have laid in a supply to carry them over the Christmas time. R. A. BURNETT & Co.

CINCINNATI, Dec. 7.—There is a good demand for all kinds of extracted honey. White clover and basswood sell at 8@8½c; amber and Southern, 6@7c, according to quality and package. Fancy comb honey in no-drip shipping-cases sells at 15@16c; darker grades hard to sell at any price. Beeswax, 26c. C. H. W. WEBER, Successor to Chas. F. Muth & Son and A. Muth

KANSAS CITY, Dec. 9.—We quote No. 1 white comb, 13½@14c; No. 2, 13@13½c; No. 1 amber, 13@13½c; No. 2, 12@13c. Extracted, white, 7½@8c; amber, 7@7½c; dark, 5½@6c. Beeswax, 20@22c. C. C. CLEMONS & Co.

NEW YORK Dec. 10.—Demand is very good for all grades of comb honey. Receipts are somewhat light and not up to former years. We quote:

Fancy white, 15 cents; No. 1, white, 13@14c; amber, 11@12c; and buckwheat, 9@11c, as to quality. Extracted remains firm at following prices: California white, 8½c; light amber, 8c; white clover and basswood, 8c; amber, 7½c. Very little trade for extracted buckwheat as yet. Southern, fancy, 7½c per pound; other grades, as to quality, from 70c to 75c gallon. Beeswax quiet at 26@27c. HILDRETH & SEGELKEN.

CLEVELAND, Dec. 1.—Fancy white, 16@17c; No. 1 white, 15@16c; No. 1 amber, 13@14c; No. 2 amber, 12@13c; buckwheat, 9@10c. White extracted, 8@9c. A. B. WILLIAMS & Co.

BOSTON, Dec. 8.—We quote as follows: Fancy white, 16c; A No. 1, 15c; No. 1, 13@14c; buckwheat will not sell in this city. Extracted, light amber, 7@8c.

There is very little now to report in the line of our honey market. The retail trade are loath to pay the higher prices and are buying in a very small way, still the demand is fully equal to the supply. BLAKE, SCOTT & LEE.

ALBANY, Dec. 10.—We quote: Fancy white comb, 15c; No. 1 white, 13@14c; mixt, 11@13c; buckwheat, 10@11c. Extracted, white, 8@9c; mixt, 6½@7c; dark, 6. Beeswax, 26@28c.

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OMAHA, Dec. 11.—The November trade has up to the present not been as good as was expected, and shows a falling off from October. It seems that the somewhat higher prices this fall are affecting the consumptive demand to some extent, still the warm weather yet prevailing in this part of the country may also be partly responsible for it. While trade has been light, prices have been well maintained, nobody being burdened with stock to such an amount as to become oppressive.

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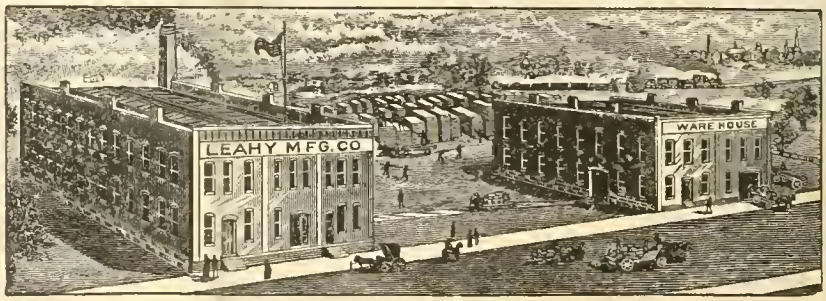

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